Understand millions.

1. A bowl holds 100 peanuts. How many bowls would hold a million peanuts?_____

2. If you save 10¢ a day, how many days would it take to save a million cents?
_____

3. If you read 100 pages a week, how many weeks would it take you to read a million pages?_____

4. How many dimes are in one hundred dollars?_____

5. How many cents would you have if you saved one hundred dollars?_____

6. If you eat 10 apples a month, how many apples do you eat in one year?_____

7. If water pours into an empty fish pond at 10 gallons a minute, how many minutes does it take to fill the 10,000 gallon pond?_____

8. If you earn $10 a week, how many week would it take to earn one hundred dollars?_____

23+38=_____ 53-31=_____ 42x6=_____

429	429	987	754	765
+42	-42	-326	+428	+21

Write the value of the underlined digit.

421,<u>3</u>42,522 _____ <u>8</u>43,235,235_____

543,000,00<u>8</u>_____ 54<u>3</u>,875,921_____

4<u>3</u>2,000,001_____ 431,97<u>6</u>,000_____

Write the number in words.

423,235,210_____
_____
_____
323,000,032_____
_____
_____

Write in digits:
Eight hundred ninety-six million, four hundred seven thousand, two hundred twenty-
one_____
_____
_____

Make trees to get the factors of the following:
15 factors are _____36 factors are _____ 27 factors are _____

Write the next 4 numbers in this pattern: 8, 12, 16 _____

Greater than or less than < >

1,799,347_____1,797,221 4,820,321,343_____4,211,321,312

4,222,765,342_____3,231,453,223 431,311,531,313_____431,311,531,131

432,323_____423,232 321,000_____321,543

232,431,699_____232,431 765,976_____567,986

75 + 19=_____ 55-29=_____

7 x 8=_____ 6 x 6=_____

Rewrite the following in vertical form to add them up. Be sure to line up the correct place values.

432,493 + 43,982 + 420=

323,908+ 3,843 + 421,333=

432,321+ 98+932,311=

Write these in order from least to greatest.

3,231; 421,532; 42,322 _____

323,233; 432,513; 421,322_____

3,323; 42,322; 232_____

4,242; 432,422; 44,323_____

Remember rounding? Take the number to be rounded and look to the right of that number. If that number to the right is 5 or more your digit goes up. If it is 4 or less the digit stays the same and it is rounded down. Then change all the digits to the right with zeros.

Round 783 to the nearest 10. Answer is 780

Round to the nearest 10:

323_____ 44_____5,323_____

Round to the nearest 100:

499_____ 323_____6,498_____

Round to the nearest 1000:

5,234_____8,685_____9,678_____

Round to the nearest 10,000

79,488_____87,976_____

Round to the nearest 100,000

897,087_____ 843,001_____

Using a table

STATES	
Name	Population
California	32,643,321
Georgia	7,522,421
Arkansas	2,421,509
Indiana	12,332,322

Which state has the greatest population?_____

Which state has a population of eight million when rounded to the nearest million?_____

Which states have populations greater than 10,000,000?_____

Add or subtract the following vertically

532,321,642 + 213,356,677 + 336,643=_____

434,234,156+757,432,788+10,000=_____

653,323 – 331,532=_____

Commutative Property of addition

An easy way to add a column of single digit numbers is to find all that equal ten first. Show how you would group these numbers, then add them to find the sum.

7	2	7	1
3	5	5	5
4	4	6	+9
5	5	3	
+6	+ 6	+ 4	

When a number shows up several times, add those digits first.

4	3	5
2	7	4
2	7	5
2	+ 7	4
+ 2		+ 4

As Jadyn walked through the seashore, she turned over 6 sand buckets and counted the number of seashells under each. She found 2,4,4,4,6,8 seashells under the buckets. How many seashells did she count?

The number of children in the 10 rows at church were 3,3,4,4,5,5,3,3,3,6. How many children were there altogether?

Opposite operations
We know that 5 + 4= 9 then 9-4=5 yes?

Fill in the addition and subtraction sentences.

8 + 6=_____ then _____-8=6

12 + _____=18 then 18 - 12=_____

7 + _____=11 then 11 - _____=_____

22 - _____= 12 then _____+_____=

14= _____- 7 then _____=_____+_____

_____+13=226 then _____-_____=_____

After 6 more people walked into the party, there were 14 people inside. How many people were inside before the 6 entered?

When I added 11 more CDs to my collection, I had 37 total. How many Cd's did I have before I added the new ones?

On Saturday afternoon, we rode up the mountain. We went a total of 57 miles. If the return trip was 29 miles, how far was the trip there?

When adding inches, regroup 1 foot for every 12 inches.

$$\begin{array}{r} 1 \text{ ft } 8 \text{ in} \\ +1 \text{ ft } 8 \text{ in} \\ \hline 2\text{ft } 16 \text{ in} \end{array}$$

16 in.=1 ft 4 in.

$$\begin{array}{r} 2\text{ft} \\ +\ 1 \text{ ft } \ 4 \text{ in.} \\ \hline 3 \text{ ft} \quad 4 \text{ in.} \end{array}$$

$$\begin{array}{r} 2\text{ft.} \quad 4 \text{ in.} \\ +1\text{ft.} \quad 9\text{in.} \\ \hline \end{array}$$

$$\begin{array}{r} 12\text{ft.} \ \ 10 \text{ in.} \\ +1\text{ft.} \quad 5 \text{ in.} \\ \hline \end{array}$$

$$\begin{array}{r} 7\text{ft.} \ \ 4 \text{ in.} \\ +\ 5\text{ft} \ \ 5 \text{ in.} \\ \hline \end{array}$$

$$\begin{array}{r} 28 \text{ ft.} \ \ 8 \text{ in.} \\ +4\text{ft.} \ \ 9\text{in.} \\ \hline \end{array}$$

$$\begin{array}{r} 8 \text{ ft.} \ \ 9 \text{ in.} \\ +\quad 7 \text{ in.} \\ \hline \end{array}$$

Write the following in words 321,445,010_____

_____

_____

_____

What is the value of the underlined digit 4<u>3</u>2,677,321,987_____

Add 321,256,333,799 + 321,467,555,001= _____

Adding ounces and pounds

When adding ounces, regroup 1 pound for every 16 ounces.

8lb. 12 oz.
+1lb. 8 oz.
9lb. 20 oz.

20 oz.= 1 lb. 4 oz.

9 lb.
+ 1lb. 4 oz.
10 lb. 4 oz.

2 lb. 7 oz.
+ 1 lb. 11oz.

3 lb. 11 oz.
+1 lb. 11oz.

38 lb. 12 oz.
+ 9lb. 13 oz.

7 lb. 12 oz.
+ 13 oz.

15 oz.
+ 3lb 5 oz.

23 lb. 8 oz.
+ 2 lb 8 oz.

The twin babies were born today. One weighed 5 lbs. 4 oz. and the other one weight 6 lbs 8 oz. How much do the babies weigh together?

Adding minutes and hours

When adding time, regroup every 60 minutes to 1 hour.

2 hr. 24 min.	5 hr + 1 hr. 1 min=
+3 hr. 37min.	6 hr 1 min.
5 hr. 61 min	61 min = 1 hour 1 min.

16 hr. 51 min.	4 hr. 43 min.	2 hr. 39 min.
+ 4 hr. 8 min.	+2hr. 42min.	+1hr. 28 min.

Use the clock to help you with these

If it is 12:15 p.m. What time will it be in 50 min.?_____

If it is 6:25 a.m. What time will it be in 1 hour 5 min.?_____

It is 1:15 p.m. what time will it be in 4 hours 30 min.?_____

The amount of time that I exercised this week was:

Monday	1 hr. 10 min.
Tuesday	30 min.
Wednesday	15 min.
Thursday	2 hr. 5 min.
Friday	45 min.
Saturday	3 hr.

What is the total amount of time I exercised with activity?_____

Review

3,234,244 + 28 + 2,345=_____

3 + 7+ 5 +4 + 6 + 3 + 7=_____

15 + _____=27

_____+19=_____

375+643=_____

8 ft. 11 in.	14 lb. 8 oz.	4 hr. 44 min.
+2 ft 6 in.	+ 6 lb. 9 oz.	+ 2 hr. 50 min.

We are having friends over for turkey dinner. We have bought two turkeys for dinner. One weights 15 lbs. 4 oz. and the other one weighs 19 lbs 14 oz. how much turkey do we have to feed everyone?

_____

Estimating

To estimate the outcome of numbers, round the numbers and then add or subtract. This skill can be used everyday. An example would be if you have a distance of 862 miles to travel and you have gone 381, you can round and subtract in your head 900-400 leaves approximately 500 more miles to go.

48 + 13= (50 + 10= 60) The real answer is 61 but we are using estimated amounts.

Subtract or add by estimating. Write the estimating problem next to the original.

93	571	4866
-68	+254	-2734
71	622	8765
+17	-489	+2436

I have our friends coming to visit and there are 12 of our family, 11 in the Bakers and 8 in the Anters. We need to make 3 tacos per person about how many tacos should I make. Not exact, estimate the amount.

_____

Solve.

_____-10= 5 so 5 + 5 = 10

_____-8= 9 so _____+_____=_____

_____-12=_____ so _____+_____=_____

_____-8=_____so _____+_____=_____

We also know that if 11 -4= 7 then 11-7=4 right?

12 -_____= 7 then 12-_____=5

33-_____=11 then 33 -_____=22

85-_____=25 then 85-_____=_____

187-_____=____ then 187-_____=_____

After I gave my friend 12 candies from my stash, I still had 14 pieces left. How many pieces did I have before I shared with my friend?

The bag of donuts had 20 left in it. Stephen took some out for breakfast and left 13 in the bag. How many did he eat?

A variable is a letter in an equation that stands for what is not known. Solve the missing number. The first one is done for you.

25- 13= x x = 12

26,251-421= c c=_____

17-13= p p=_____

5,222- 133= r r=_____

85-50= b b=_____

356- 123= k k=_____

2,871-1,897=s s=_____

76-22= r r =_____

7,326-2,333= x x=_____

Subtract the units. Regroup the feet and inches.

3 ft. 5 in.
-1 ft. 8 in.

Cannot take 8 from 5, so regroup 1 foot.

2 + 12 in. → 17 inches

~~3~~ 2 ft. 5 in.
-1 ft. 8 in.

2 ft. 17 in.
-1 ft. 8 in.
1 ft. 9 in.

5 ft. 8 in.
-3 ft 9 in.

17 ft. 3 in.
- 5 in.

11 ft. 5 in.
-8 ft. 6 in.

20 ft. 4 in.
-5ft 8 in.

17 ft. O in.
- 1 ft. 6 in.

115 ft.
-7 ft. 8 in.

Subtract the units. Regroup the days and the week.

3 weeks 1 day - 1 week 5 days=_____

5 weeks 2 days - 2 weeks 5 days=_____

Subtracting different bases

Rewrite the following and line up vertically to subtract. Regroup as needed.

17 lb. 3 oz - 12 lb. 5 oz.=_____

5 lb. 8 oz.- 3 lb 8 oz.=_____

17 lb. 3 oz. – 12 lb. 11 oz.=_____

7 lb – 1 lb 9 oz.=_____

3 min. 25 sec.- 1 min. 45 sec.=_____

7 min. 46 sec.- 3 min 29 sec.=_____

12 min. 19 sec- 8 min. 42 sec.=_____

16 min. 43 sec.-8 min 25 sec.=_____

Remember how to multiply with one digit multiplication. If not ask your teacher.

322 X 8	1,134 x 2	879 x 5
739 X 2	654 x 5	6,543 x 7
121 X 2	4322 x 3	322 x 5

Lets do some mental math—give this to mom and have her ask you

1. how many tens in 543
2. how many hundreds in 801
3. write me the number 4,329
4. write me the number 50, 398
5. write me the number 342,201
6. add 3 + 5+ 2-1=
7. add 2+2+2+2-1=
8. how many sides to a rectangle?
9. Add 20 + 30-5

More one digit practice.

327	7654	5432
X 3	x 2	x 5

5,432	432	6,890
X 6	x 5	x 2

Add the following:

4,321+5,654+2+214=_____

Subtract the following:

3,356-2,107=_____

5,000-2,987=_____

Two digit multiplication---ask if you need to know how to do them.

44 X22	77 x14	22 x14	11 x63
21 X16	15 x14	28 x11	32 x36
32 X11	32 x21	65 x27	88 x22

Rewrite the following and solve:

55 x 22=_____ 43 x 81=_____

Practice some more

432 X21	654 x21	333 x11
3,198 X 3	5,214 x 21	2,125 x214
321 X 4	803 x217	543 x88

Multiplication opposite
Use the multiplication problems to solve the division.

6 x 7= 42 then 42÷7= 6 and 42÷6=7

4 x 8=_____then 32 ÷8= _____ and 32 ÷4 =_____

9 x 9 =_____then _____÷_____=_____ and_____÷_____=_____

8 x 7=_____ then _____÷_____=_____ and_____÷_____=_____

5 x 5=_____ then _____÷_____=_____ and_____÷_____=_____

6 x6=_____ then _____÷_____=_____ and_____÷_____=_____

7x7=_____ then _____÷_____=_____ and_____÷_____=_____

8x8=_____ then _____÷_____=_____ and_____÷_____=_____

4x4=_____ then _____÷_____=_____ and_____÷_____=_____

3x3=_____ then _____÷_____=_____ and_____÷_____=_____

2x2=_____ then _____÷_____=_____ and_____÷_____=_____

10x10=_____ then _____÷_____=_____ and_____÷_____=_____

Solve: 543 x 213=_____

REVIEW

Write 4,507,303,027 in words_____

_____

_____

Write in numerals: sixty-nine million, one hundred twelve thousand, two hundred seven.

_____

Round 3,242 to the nearest hundred._____

Round 27,456 to the nearest ten._____

Round 78,531 to the nearest thousand._____

3 + 7 + 4+ 6 + 2=a a =_____

26,425 + 932= x x =_____

59 + _____=78

22 ft. 7 in.	7lbs. 10 oz.	8,432,427
+ 3ft. 6in.	+3 lbs 10 0z.	- 25,871

_____-42=39 87-_____=43 17 min. 15 sec.

- 5min. 22 sec.

How much change from $5.00 for a $3.29 purchase?_____

REVIEW

37x85=_____ (7x7) x5=_____

75 x 8= x x =_____ 4 x93= c c =_____

43 x 33=_____x 43 124 x 22= k k=_____

Multiple 43 x 100= x x=_____ 57 x 1000= y y=_____

Estimate 4,521 + 3,451=_____ 79 x 8=_____

What is the value of the underlined digit 4<u>3</u>2,356,666,000_____

What is the value of the underlined digit 543,6<u>6</u>6,777,333_____

5,362	6,875	5,399
<u>+3,543</u>	<u>-3,999</u>	<u>x2,765</u>

$2\overline{)420}$ $6\overline{)636}$ $5\overline{)525}$

$3\overline{)312}$ $3\overline{)9{,}021}$ $8\overline{)816}$

$2\overline{)432}$ $5\overline{)325}$ $7\overline{)497}$

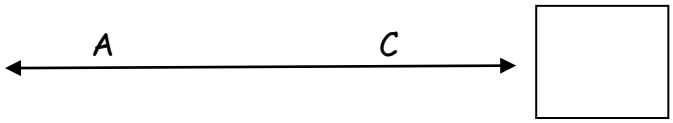
Lets work more on long division

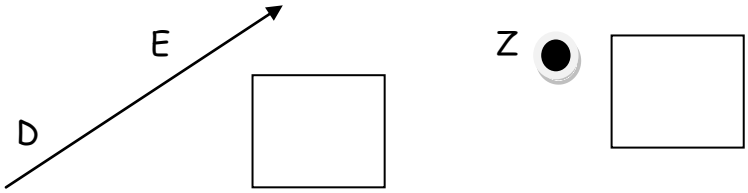
$2\overline{)630}$ $6\overline{)642}$ $5\overline{)625}$

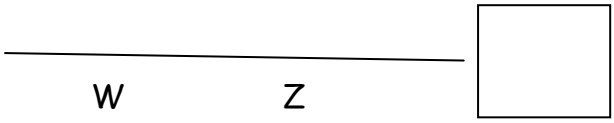
$3\overline{)324}$ $3\overline{)9{,}636}$ $8\overline{)872}$

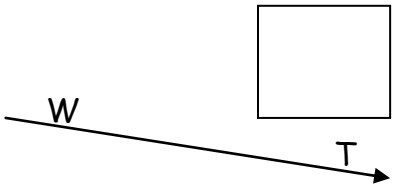
$2\overline{)474}$ $5\overline{)365}$ $7\overline{)463}$

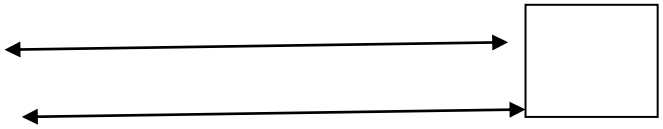
Write the correct letter in the box next to the figure.

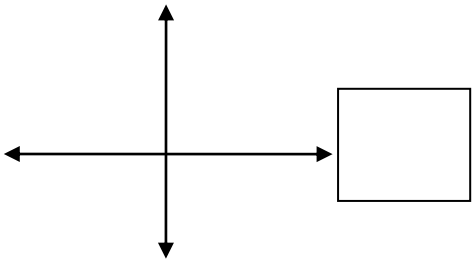


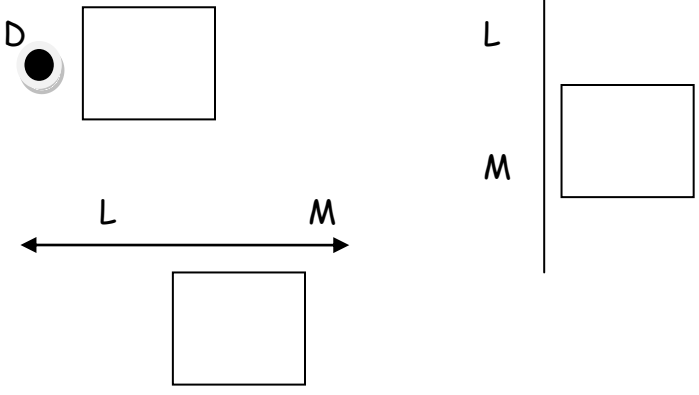












A. Line AC
B. Line LM
C. Line segment LM
D. Line segment WZ
E. Parallel lines
F. Perpendicular lines
G. Point D
H. Point Z
I. Ray DE
J. Ray WZ

Here are some hints that will help you determine the divisibility of a number:

1. A number is divisible by 2 if it is even (ends in 0,2,4,6,8)
2. A number is divisible by 5 if it ends in 0 or 5
3. A number is divisible by 10 if it ends in 0
4. A number is divisible by 3 if the sum of the number's digits is divisible by 3.
5. A number is divisible by 9 if the sum of the number's digits is divisible by 9

$7\overline{)4977}$ $5\overline{)25575}$ $4\overline{)41624}$

Draw an octagon

Draw a diamond

When you work with larger numbers dividing you round the number you are dividing by to make it easier. If you have leftovers you write it with a remainder (r)

$22\overline{)3849}$

$51\overline{)6578}$

$31\overline{)32678}$

$28\overline{)3276}$

$12\overline{)781}$

$11\overline{)12111}$

Practice some more….

$42\overline{)4221}$ $5\overline{)45270}$

$30\overline{)90120}$ $11\overline{)65432}$

$71\overline{)8926}$ $20\overline{)32670}$

REVIEW

87+ 26,654 + 3=_____ 22 + _____=39

7ft. 3 in.	3 wks 2 days	89-27=x
+2 ft. 9in.	- 3 days.	X=_____

29, 353
+ 7,543

87 x 4=_____

22 ⟌ 3849

9 ⟌ 736

76 x 30=_____

What is the change from a five dollar purchase of $2.32?_____

Draw:

Acute angle

right angle

obtuse angle

Draw a pentagon

Draw a hexagon

Multiplication with zeros

Any time you have a number times a multiple of ten you just add extra zeros.

If you have 342 x 100= there are 2 zeros so your answer is 34,200

If you have 567 x 1000= there are 3 zeros so your answer is 567,000

Solve:

354x10=_____ 4325x1000=_____

5423x100=_____ 543x100=_____

32x10,000=_____ 87x1000=_____

42x10000=_____ 124x1000=_____

53 x 10000=_____ 3,231x 10000=_____

1. I bought a ball for $2.42, a bat for $1.75, and a mitt for $1.25 How much did I spend in all?

2. I went out to lunch and spent $2.75 on pizza, 43¢ on an apple, and 85¢ on milk. How much did I spend in all? I paid with a $5.00 how much change should I get back?

3. My girls weight 23 lbs, 46 lbs, 57 lbs, and 76 lbs. How many lbs all together do they weigh?

4. My boys have driven 3,243 miles this year. My girls have driven 1, 768 miles. How many more miles did the boys drive?

Multiplying money

When you multiply dollars and cents, you do so the same way when you multiply other numbers. When you are finished, you count over how many decimal places over are in your problem and then move it over in your answer.

$5.75	$4.32	$2.67
X 43	x 9	x31

$25.54	$32.87	$12.99
X 32	x12	x 33

543x100=_____ 66x100=_____

213x10=_____ 632x1000=_____

43x1000=_____ 754x10=_____

543	654	782	211	201
X213	x212	x321	x432	x732

Fill in the blanks:

1 gallon is_____quarts

3 gallons are _____quarts

1 yard is _____feet

1 foot is_____inches

1 mile is_____feet

1 kilogram is _____grams

1 quart is_____pints

1 pint is _____cups

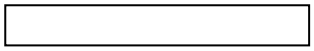
Perimeter---add up the sides Area is L x W= area

5 ft

3ft 

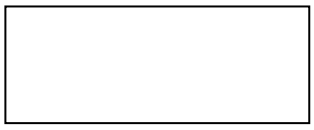
What is the area:
What is the perimeter:

10 ft

2ft 

What is the area:
What is the perimeter:

3 inches

2 inches 

what is the area:
What is the perimeter:

Make me tally marks for the following:

14 15 8

Division two digit

20 ⟌ 4020 11 ⟌ 232 50 ⟌ 2504

Roman numerals from 10 to 100, counting by tens

X XX XXX XL L LX LXX LXXX XC C

I is 1 X is 10 C is 100 M is 100
V is 5 L is 50 D is 500

Can you write the following numbers based on the chart:

17 _____200 _____35_____42_____70_____525_____

Fill in the chart:
There are _____hours in 1 day
There are _____minutes in 1 hour
There are ____seconds in 1 minutes

How many minutes are there in 6 hours and 12 minutes?_____
How many seconds are there in one day?_____
How many minutes are there in one day?_____
How many hours are in 6 days?_____

1 ft=_____in 1 lb=_____oz 1 pt=_____cups

1 yd=_____ft 2000lb=_____ton 1 qt=_____pts

1 mile=_____ft 1 gal=_____qt

1 mile=_____yd

FRACTIONS

Fractions show a part of a whole. They are written like this

3 numerator

5 denominator

You can make an equivalent fraction by dividing or multiplying both the numerator and denominator by the same number. Here is an example:

$\frac{1}{4} \times 2 = \frac{2}{8}$ multiply both the numerator and denominator by 2

$\frac{9}{12} \div 3 = \frac{3}{4}$ divide both the numerator and denominator by 3

This shows you that both of those numbers above are equal.

This is also helpful in learning how to simplify your fractions and reduce it down to lowest terms. It is much easier to say I have $\frac{3}{4}$ of a candy bar instead of 9/12.

A fraction is in the lowest terms when its numerator and denominator have no common factors greater than 1. Remember the trees? So to put a fraction to it's lowest terms, divide its numerator and denominator by common facts, until they have no common factor greater than 1.

Here is an example.

$\frac{5}{10} \div 5 = \frac{1}{2}$ ***remember whatever you do to the numerator has to be done to the denominator

$\frac{1}{2}$ is the reduced to lowest terms. Reduce the following fractions to lowest terms:

$\frac{4}{16} =$_____ $\frac{6}{24} =$_____ $\frac{5}{30} =$_____ $\frac{2}{10} =$ _____

Improper fractions and mixed numbers

When the numerator of a fraction is equal to or greater than the denominator, the fraction is called an improper fraction. Here are some examples of improper fractions. $\frac{5}{5}$, $\frac{7}{4}$, $\frac{13}{3}$. When you have an improper fraction they should be written as whole numbers and one part that is a fraction. Instead of saying $\frac{7}{4}$ you should say 1 ¾ .

The bar in a fraction means the same thing as a division sign. When you see 7/4 it says 7 divided by 4. If you were to write that out as a division problem like this:

$4\overline{)\ 7}$ Then solve.

When you have a remainder, instead of writing it as a remainder (3), you write it as the numerator and the divisor (4) becomes the denominator. Answer is $1\ \frac{3}{4}$

Let's practice changing these improper fractions to proper fractions with whole numbers. Do them as a division problem so you can get an answer. You will eventually do them in your head.

$\frac{14}{3}$ =_____ $\frac{4}{3}$ =_____ $\frac{11}{5}$ =_____

$\frac{7}{2}$ =_____ $\frac{3}{2}$ =_____ $\frac{16}{5}$ =_____

$\frac{4}{3}$ =_____ $\frac{8}{8}$ =_____ $\frac{32}{32}$=_____

Identify which of the following is an example of: mixed number, fraction, improper fraction, whole number

33_____ $2\ \frac{1}{2}$ _____

¾ _____ $\frac{49}{17}$ _____

Let me teach you how to calculate the following equivalent fractions by doing the Z method.

$\frac{1}{4} = \frac{\quad}{20}$ $\frac{2}{3} = \frac{\quad}{15}$ $\frac{3}{5} = \frac{\quad}{25}$

$\frac{5}{9} = \frac{\quad}{45}$ $\frac{1}{2} = \frac{\quad}{8}$ $\frac{3}{4} = \frac{\quad}{12}$

$\frac{7}{8} = \frac{\quad}{32}$ $\frac{3}{7} = \frac{\quad}{28}$ $\frac{1}{10} = \frac{\quad}{50}$

$\frac{1}{5} = \frac{\quad}{30}$ $\frac{5}{6} = \frac{\quad}{24}$ $\frac{4}{7} = \frac{\quad}{14}$

$$\begin{array}{r} 23{,}456 \\ -\ 7{,}789 \\ \hline \end{array}$$

$$\begin{array}{r} 6{,}876{,}999 \\ +543{,}865 \\ \hline \end{array}$$

$5\overline{)\,25670}$

When you add and subtract fractions, as long as the denominators are the same, you add the numerators. When you have $\frac{3}{4} + \frac{1}{4}$ = What you are saying is that you have 3 parts of the pie cut into 4 pieces plus 1 part of the pie cut in 4 pieces. How many do you have altogether? 3 plus 1 equals 4 parts of the pie cut into 4 pieces. Which equals 1 whole pie.

Remember to reduce down your answer to lowest terms if the fraction can be divided by a number or if the top is bigger (improper)

$\frac{1}{5} + \frac{4}{5} =$ $\frac{5}{8} + \frac{6}{8} =$ $\frac{5}{9} + \frac{4}{9} =$

Subtract the same way:

$\frac{5}{7} - \frac{4}{7} =$ $\frac{13}{6} - \frac{5}{6} =$ $\frac{8}{3} - \frac{3}{3} =$

Circle the ODD numbers

432,234,123	543,879,900	543,876,999	543,876,567
223,876,222	123,897,000	333,333,333	777,777,778

The bus started with 6 ½ gallons of gas. When the driver add 9 ½ more gallons of gasoline, how much gasoline was in the bus?_____

The leader cut a watermelon in 16 slices. The girls at 8 of the slices. What fraction of the watermelon did they eat?_____

The girls swam and played in the water for 1 ¾ hours. Then they sat in the sun for ¾ hour. How many hours did they play and sunbathe?_____

After dinner, we had a campfire. First, we sang for $1\frac{1}{3}$ hours. Then , we told stories for $\frac{2}{3}$ hour. If we put the fire out and went to sleep at 10:30p.m., what time did we begin the campfire?_____

Our family stopped for a picnic after driving for $57\frac{1}{5}$ miles. After the picnic, we drove for another $43\frac{4}{5}$ miles before reaching the ocean. How far were we from home?_____

32 x 10,000=_____456 x 100=_____

29 x 100=_____ 343 x 10,000=_____

342	32,621	98,765	8 ⟌ 356
X 121	+32,873	-11,399	

Adding unlike fractions—reduce down to lowest terms

$\frac{1}{10} + \frac{4}{5} =$ _____

$\frac{3}{12} + \frac{1}{6} =$ _____

$\frac{1}{2} + \frac{1}{3} =$ _____

$\frac{2}{3} + \frac{1}{4} =$ _____

$\frac{5}{12} + \frac{1}{6} =$ _____

$\frac{2}{5} + \frac{9}{20} =$ _____

Change the following mixed numbers into improper fractions.

1 ¼ =_____ 3 ½=_____ 6 ½ =_____

2 ¾ =_____ 5 $\frac{1}{3}$=_____ 3$\frac{4}{5}$=_____

Change the following into a mixed number

$\frac{14}{3}$=_____ $\frac{22}{5}$=_____ $\frac{11}{5}$=_____

$\frac{11}{4}$=_____ $\frac{9}{2}$=_____ $\frac{32}{9}$=_____

Subtracting unlike fractions

$\frac{3}{5} - \frac{1}{4}$ = _____

$\frac{5}{6} - \frac{1}{3}$ = _____

$\frac{9}{16} - \frac{1}{4}$ = _____

$\frac{2}{3} - \frac{1}{12}$ = _____

$\frac{18}{25} - \frac{2}{5}$ = _____

$\frac{1}{7} - \frac{1}{14}$ = _____

Rewrite the following vertically and solve.

$\frac{8}{16} - \frac{2}{8}$ =

$\frac{2}{10} + \frac{3}{5}$ =

$\frac{12}{4} - \frac{9}{2}$ =

$\frac{51}{10} + \frac{1}{5}$

Adding mix numbers with different denominators. Rewrite the following in vertical column form to add.

5 5/6 + 7 ¾=

10 1/7 + 3 2/3=

9 ½ + 7/8=

8 ¼ + 17 3/10=

2 4/5 + 1 ½=

1 1/5 + 2 2/3=

Whole number-mixed number subtraction—mom show you

3- 2 1/6=

A. Write the whole number as a mixed number (3=2 6/6)
B. Subtract the fractions
C. Subtract the whole numbers
D. Reduce the answer to lowest terms

Rewrite the following vertically

5 – 2 ½=

11- 2 ¾=

3- 1 ¼=

12- 4 5/7=

5 – 1/3=

9 – 3 1/3=

Adding and Subtracting Fractions

Step 1 – Find a common denominator (a number that both denominators will go into)
Step 2 – Raise each fraction to higher terms as needed
Step 3 – Add or subtract the numerators only as shown
Step 4 – Carry denominator over
Step 5 – Change the answer to lowest terms

Example #1: $\frac{1}{2} + \frac{7}{8} =$ Common denominator is 8 because both 2 and 8 will go into 8

$$\frac{1}{2} = \frac{4}{8}$$

$$+ \frac{7}{8} = \frac{7}{8}$$

$$\frac{11}{8} \text{ which simplifies to } 1\frac{3}{8}$$

Example #2: $4\frac{3}{5} - \frac{1}{4} =$ Common denominator is 20 because both 4 and 5 will go into 20

$$4\frac{3}{5} = 4\frac{12}{20}$$

$$- \frac{1}{4} = \frac{5}{20}$$

$$4\frac{7}{20}$$

Practice

Rewrite the following vertically to solve.

7/8 + 2/3=

3 2/3 - ½ =

Example : $2\frac{1}{8} = 2\frac{1}{8} = 1\cancel{2}\frac{1}{8} + \frac{8}{8} = 1\frac{9}{8}$

$-\ 1\frac{1}{4} = 1\frac{2}{8} = 1\frac{2}{8} = 1\frac{2}{8}$

$\frac{7}{8}$ **

****Note** – In this problem you must borrow from the whole number to adjust your fraction so that you can subtract. However, you may do this problem another way. Simply change the mixed number to improper form before finding the common denominator to prevent having to borrow.

$2\frac{1}{8} = \frac{17}{8} = \frac{17}{8}$

$-\ 1\frac{1}{4} = \frac{5}{4} = \frac{10}{8}$

$\frac{7}{8}$

A. Write as an improper fraction.

1. $1\frac{1}{8}$ _____ 2. $4\frac{1}{5}$ _____ 3. $1\frac{2}{3}$ _____ 4. $2\frac{3}{16}$ _____

5. $2\frac{5}{7}$ _____ 6. $2\frac{1}{16}$ _____ 7. $1\frac{5}{8}$ _____ 8. $3\frac{4}{5}$ _____

9. $7\frac{1}{4}$ _____ 10. $5\frac{2}{3}$ _____ 11. $3\frac{5}{6}$ _____ 12. $6\frac{1}{2}$ _____

Write as a mixed number.

1. $\frac{10}{4}$ _____ 2. $\frac{19}{2}$ _____ 3. $\frac{25}{3}$ _____ 4. $\frac{9}{8}$ _____

5. $\frac{25}{16}$ _____ 6. $\frac{35}{4}$ _____ 7. $\frac{7}{3}$ _____ 8. $\frac{21}{8}$ _____

9. $\frac{4}{2}$ _____ 10. $\frac{12}{7}$ _____ 11. $\frac{17}{4}$ _____ 12. $\frac{48}{9}$ _____

Write in lowest terms.

1. $\frac{6}{32}$ _____ 2. $\frac{21}{35}$ _____ 3. $\frac{18}{24}$ _____ 4. $\frac{12}{15}$ _____

5. $\frac{5}{30}$ _____ 6. $\frac{9}{27}$ _____ 7. $\frac{14}{49}$ _____ 8. $\frac{8}{32}$ _____

5. $1\frac{12}{21}$ _____ 10. $2\frac{16}{20}$ _____ 11. $5\frac{8}{14}$ _____ 12. $3\frac{10}{25}$ _____

Add or subtract as shown.

1. $\frac{3}{8} + \frac{7}{8} =$

2. $\frac{2}{3} + \frac{3}{4} =$

3. $\frac{3}{32} + \frac{1}{8} =$

4. $\frac{3}{5} + \frac{5}{6} =$

5. $\frac{5}{8} + \frac{1}{10} =$

6. $\frac{3}{8} + 1\frac{1}{4} =$

7. $\frac{1}{4} + \frac{1}{5} =$

8. $2\frac{1}{8} + 1\frac{1}{4} =$

9. $1\frac{5}{8} + \frac{13}{16} =$

10. $2\frac{2}{3} + \frac{4}{9} =$

More practice☺

$\frac{9}{10} - \frac{3}{16} =$

$\frac{7}{8} - \frac{1}{2} =$

$\frac{11}{16} - \frac{1}{4} =$

$\frac{5}{6} - \frac{1}{5} =$

$\frac{7}{8} - \frac{3}{10} =$

$1\frac{1}{2} - \frac{3}{32} =$

$5\frac{5}{6} - 2\frac{3}{9} =$

$3\frac{2}{3} - 1\frac{7}{8} =$

$2\frac{1}{4} - \frac{5}{6} =$

$4\frac{5}{6} - 1\frac{1}{2} =$

REVIEW

$\frac{2}{3} = \frac{\quad}{15}$ reduce to lowest terms. $\frac{9}{12} = \frac{\quad}{\quad}$ $\frac{18}{54} = \frac{\quad}{\quad}$

Compare using < >

$\frac{13}{27}$ $\frac{12}{27}$ $\frac{5}{6}$ $\frac{3}{4}$ $2\frac{3}{4}$ $\frac{13}{4}$

Add or subtract. Rewrite if necessary.

1/5 + 2/5= 3/8+2/8= ¾+1/2=

7/8-3/4= 5 ½ +2 ½ = 2 1/8- 1 5/8=

21/5-21/10= 5 1/6+3 2/4= 5/3+2/5=

Draw a picture of each fraction:

3 ¼ 10/3

Multiplying Simple Fractions

Step 1 – Multiply the numerators
Step 2 – Multiply the denominators
Step 3 – Reduce the answer to lowest terms

Example: $\frac{1}{7} \times \frac{4}{6} = \frac{4}{42}$ which reduces to $\frac{2}{21}$

H. Multiplying Mixed Numbers

Step 1 – Convert the mixed numbers to improper fractions first
Step 2 – Multiply the numerators
Step 3 – Multiply the denominators
Step 4 – Reduce the answer to lowest terms

Example: $2\frac{1}{3} \times 1\frac{1}{2} = \frac{7}{3} \times \frac{3}{2} = \frac{21}{6}$ which then reduces to $3\frac{1}{2}$

The best way to multiply fraction is to reduce down before you multiply. Then multiply across

$\frac{\cancel{3}}{\cancel{9}} \times \frac{1}{\cancel{6}} = \frac{3}{2} = 1\frac{1}{2}$

$\frac{\cancel{12}}{2} \quad \frac{\cancel{3}}{1}$

The 6 and the 12 can be reduced by 6. So you cross of the 6 and make it 1. The 12 becomes 2. 9 and 3 can be divided by 3, so you cross off and make it 3 and 1. You can't reduce anymore so you just multiply across. You get 3/2 and since that is an improper fraction, you reduce it down to lowest terms. When you reduce, it can be either number up and down, not reducing side by side. Let's try doing some on your own. Remember reduce FIRST and then multiply across.

$\frac{3}{4} \times \frac{12}{9} =$ _____ $\frac{10}{5} \times \frac{9}{3} =$ _____ $\frac{4}{9} \times \frac{18}{20} =$ _____

$\frac{3}{8} \times \frac{8}{4} =$ _____ $\frac{8}{20} \times \frac{30}{8} =$ _____ $\frac{5}{10} \times \frac{2}{3} =$ _____

Dividing of fractions

When you are to divide fractions, you actually do the reciprocal of the second number and then multiply as usual.
Reciprocal means to flip the fraction around.

$\frac{1}{2} \div \frac{6}{3}$= Rewrite $\frac{1}{2} \times \frac{3}{6}$= Then reduce $\frac{1}{2} \times \frac{\cancel{3}^{1}}{\cancel{6}_{2}}$= $\frac{1}{4}$

$\frac{3}{4} \div \frac{9}{12}$=_____ $\frac{10}{5} \div \frac{9}{3}$=_____ $\frac{4}{9} \div \frac{20}{18}$=_____

$\frac{3}{8} \div \frac{4}{8}$=_____ $\frac{8}{20} \div \frac{8}{30}$=_____ $\frac{5}{10} \div \frac{3}{2}$=_____

When you have a whole number by itself and you need to multiple or divide, put it over 1.
7 x ½ = $\frac{7}{1} \times \frac{1}{2}$=

Solve:
7 x$\frac{1}{11}$ =_____ $\frac{1}{5}$x4=_____ $\frac{1}{9} \times \frac{1}{8}$=_____

12 x $\frac{1}{4}$=_____ $\frac{1}{100} \times \frac{1}{100}$=_____ $\frac{2}{3} \times \frac{6}{8}$=_____

Multiplying with mixed numbers

$\frac{1}{2}$x $8\frac{3}{4}$ =_____ $\frac{2}{5}$x$2\frac{1}{12}$=_____

$\frac{11}{12}$x$11\frac{1}{3}$=_____ $8\frac{2}{3}$X$\frac{1}{4}$ = _____

7 ½ X $\frac{8}{9}$=_____ 5 ¼ X$\frac{12}{7}$=_____

Dividing of fractions

When you are to divide fractions, you actually do the reciprocal of the second number and then multiply as usual.
Reciprocal means to flip the fraction around.

$\frac{1}{2} \div \frac{6}{3}$= Rewrite $\frac{1}{2} \times \frac{3}{6}$= Then reduce $\frac{1}{2} \times \frac{\cancel{3}^{1}}{\cancel{6}_{2}}$= $\frac{1}{4}$

$\frac{3}{4} \div \frac{9}{12}$=_____ $\frac{10}{5} \div \frac{9}{3}$=_____

$\frac{4}{9} \div \frac{20}{18}$=_____ $\frac{3}{8} \div \frac{4}{8}$=_____

$\frac{8}{20} \div \frac{8}{30}$=_____ $\frac{5}{10} \div \frac{3}{2}$=_____

$\frac{1}{2} \div \frac{3}{10}$=_____ $\frac{4}{9} \div \frac{2}{3}$=_____

If baseball cards are worth $\frac{1}{10}$ of a dollar each, how much are 54 cards worth?_____

Phil used $\frac{2}{3}$ cup of cheese for each pizza. He made 4 pizzas, how much cheese did he need to buy?_____

At the track meet, Sarah entered 5 sprint contests. If each race was ¼ mile long, how many miles did Rick sprint in all?_____

This year's summer vacation was $\frac{1}{6}$ of the year. How many months long was the summer vacation this year?_____

Greg's dog was asleep $\frac{2}{3}$ of the day. How many hours was it awake?_____

Fractions: multiplication and division

$\frac{7}{9}$ x $\frac{1}{4}$=_____ $\frac{5}{6}$ x $\frac{1}{10}$=_____

$\frac{9}{10}$ x $\frac{2}{3}$=_____ 8 x $\frac{1}{4}$=_____

$\frac{1}{3}$ x 15=_____

James sat in his chair for $\frac{5}{6}$ of an hour. For $\frac{1}{3}$ of this time, he worked on his assignment. What fraction of an hour did he work this assignment?_____

$\frac{1}{2}$ ÷ $\frac{1}{5}$=_____ $\frac{7}{16}$ ÷ $\frac{4}{7}$=_____

$\frac{3}{4}$ ÷ $\frac{3}{8}$=_____ $\frac{4}{20}$ ÷ $\frac{2}{10}$=_____

REVIEW

Compare using < > =

$\frac{3}{5}$ _____ $\frac{4}{5}$ $\frac{7}{8}$ _____ 1 $\frac{4}{16}$ _____ $\frac{1}{4}$

$\frac{1}{9} + \frac{5}{9} =$____ $\frac{2}{5} + \frac{1}{10} =$_____ $\frac{3}{8} + \frac{1}{6} =$ _____

$3\frac{1}{4} + 2\frac{1}{3} =$_____ $11\frac{7}{8} + 4\frac{5}{12} =$_____

Change $\frac{17}{4}$ into a mixed number:_____

Change $3\frac{2}{5}$ into an improper fraction:_____

$\frac{3}{4} \times \frac{1}{2} =$_____ $\frac{11}{12} \times \frac{4}{5} =$_____

$\frac{2}{3} \div \frac{1}{3} =$_____ $\frac{1}{2} \div \frac{1}{4} =$_____

Decimals

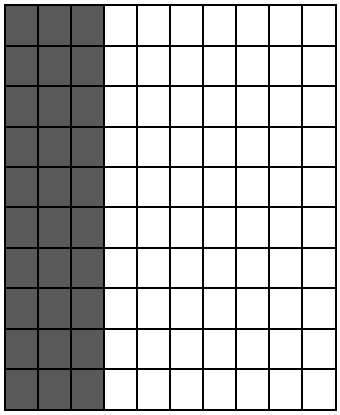
Decimals and fractions are both systems for naming parts of a whole. Just as numbers to the left of the decimal have place value, so do numbers to the right. The first place is the tenths place. (0.5= five tenths).
The second place to the right is the hundredths place (.03= three hundredths.)
The third place to the right is the thousandths place (0.008= eight thousandths).
It can keep going infinitely just like it does to the right.

For example. Once slice of pizza that is cut into ten pieces can be represented as $\frac{1}{10}$. This same quantity can be represented in decimal form as 0.1 (read one tenth). Five slices of the same pieces can be written as $\frac{5}{10}$ or 0.5 (read as five tenths).
Fractions with 100 parts such as pennies are written with a denominator of 100. Seventy five pennies is $\frac{75}{100}$ of a dollar in fraction form and 0.75 in decimal form. Eight pennies can be written as $\frac{8}{100}$ or 0.08. The placement of the 8 is very important. A misplaced decimal point can change . 08 to 0.8

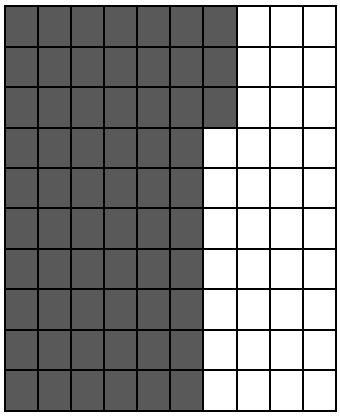
Always read a decimal as a fraction. Read 3.14 as (three and fourteen hundredths) not as three point fourteen or three point one four. The word "and" is used to separate the whole number from the decimal fraction. Read 214.37 as "two hundred fourteen and thirty seven hundredths"

Color in the base ten square to represent a decimal fraction.

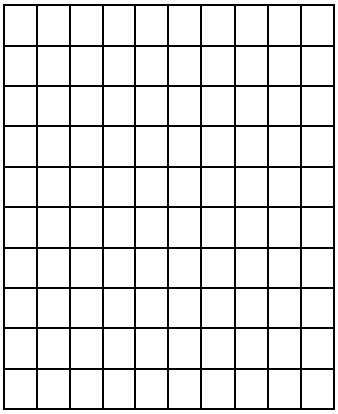
0.3 (three tenths)

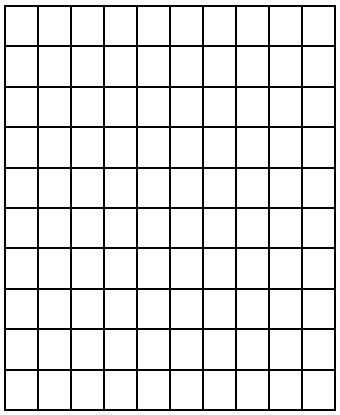


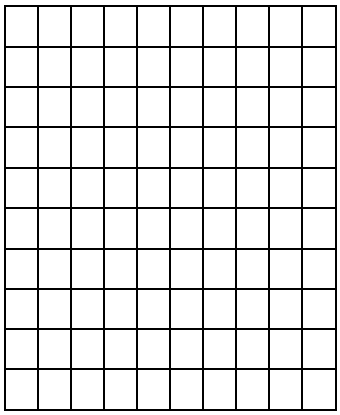
0.63 (sixty-three hundredths)

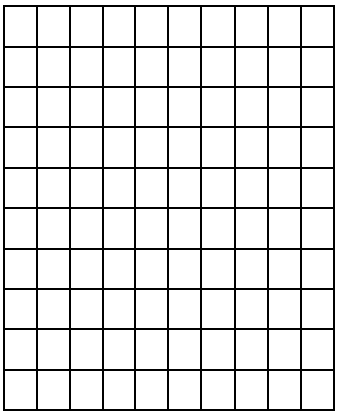


Try shading in the following base ten charts with the correct numbers 0.4 0.11 0.59

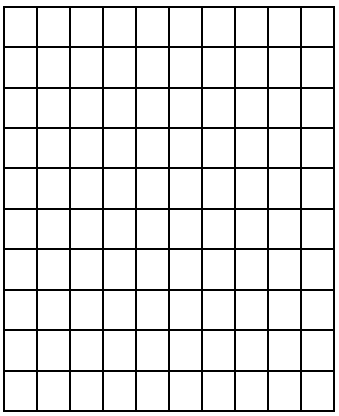




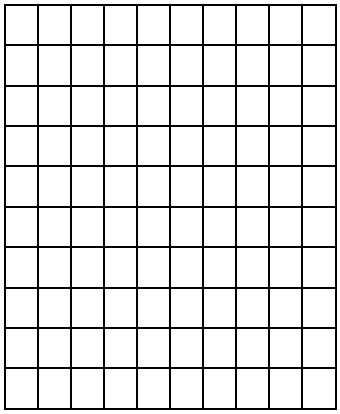




Shade 0.37

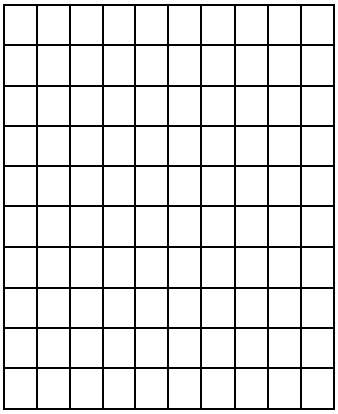


shade 0.04



shade 0.7

The decimals 0.3, 0.30, and 0.300 each represent three tenths.



Shade 0.3.
Now shade 0.300 what happens?
$\frac{3}{10}$ is the same as $\frac{3}{100}$. One is just simplified or reduced down. Can you see that?

Lets write equivalent fractions for the following given decimals.

Example 0.45 = $\frac{45}{100}$ or $\frac{450}{1000}$ or $\frac{9}{20}$

0.5_____ 0.9_____0.7_____

0.1_____0.57_____0.012_____

0.34_____0.03_____0.125_____

To compare decimal fractions look at one digit at a time.

a) Start with the whole number. The decimal with the larger whole number is greater number. 3.87 > 1.87. if the whole numbers are the same, move right to the tenths place.
b) Compare the tenths. The decimal with the larger number in the tenths place is greater number. 5.6> 5.59. If tenths are equal move to the hundredths place.
c) Compare the hundredths. The decimal with the larger number in the hundredths place is greatest. 6.37>6.368
d) Keep going

Write < > or =

0.31_____0.20 0.090_____0.09 0.33_____0.3

2.001_____2.01 0.03_____0.3 6.02_____602

9.909_____9.90 .0053_____0.53 0.87_____0.7643

When adding or subtracting decimals, just make sure to line up the numbers. If you need to add some zeros as place holder you can.

24.523	45.98	765.7645
+5.754	- 9.65	-456.8751

Add the following numbers: line up the decimals 43.20 + .04 + 2.876=_____

Subtract the following numbers, add zeros if needed: 42.87- 4.769=_____

Subtract. 754.86-7.8201=_____

Reading and writing decimals and Decimals as fractions

Practice writing decimals in words. 0.29 is twenty-nine hundredths : 4.7 is four and seven tenths; Notice that you do not reduce the fractions in decimals. All decimals have a denominator of 10,100, 1000, 10,000, etc.

Practice writing decimals as fractions and fractions as decimals. $\frac{23}{100}$ is 0.23, and 0.03 is $\frac{3}{100}$

Write the following decimals in digits:

Twenty-three hundredths_____forty-one hundredths_____

Five and three tenths_____ Five hundred twenty-three thousandths_____

Six and seven tenths_____two hundred thirty-one thousandths_____

Write the following as fractions:

0.45_____ 0.87_____ 0.4_____

0.654_____ 0.8_____ 0.76_____

Write the following as decimals:

$\frac{29}{100}$_____ $5\frac{5}{10}$_____ $\frac{234}{1000}$_____

$3\frac{23}{100}$_____ $4\frac{9}{1000}$_____ $245\frac{23}{100}$ _____

Add or subtract

43.76+2.07+0.04=_____ 56.87-5.321=_____

Because the decimal point shows you the value of each digit in a decimal, you can add zeros after the last digit of a decimal without changing its value. You can add zeros before the decimal point. All the decimals below are equal.

0.5 =0.50 =00.50 =00.500 =.5

No matter how many zeros are added after the decimal point, the decimal point shows that 4 is in the one's place

4=4.0=4.00=4.000

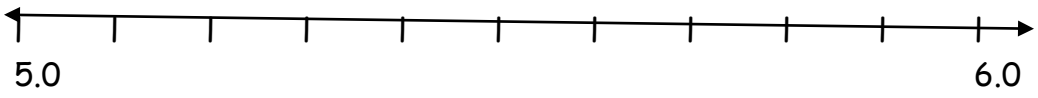
Learn to simplify decimals that have extra zeros

0.240= .24

38.00= 38

If you have 38.01 you cannot simplify that, ONLY if the zeros are to the right after the numbers

Reading decimals on a number line



Can you find on the line where 5.3 would be? How about 7.2?
Since it is divided into 10 parts, each part is 1/10 of a mark. 5.1 then 5.2 then 5.3 etc

Comparing decimals

Remember when you compare numbers, you start with the greatest place value.
Compare 8.82 and 8.98 compare the ones place 8=8
Compare the tenth's .8< .9
Then 8.82<8.98

7.77____8.98 7.07_____7.77 4.99_____4.999

3.343____3.043 58.765_____58.766 .878_____.888

54.87____5.487 84.88_____8.855 432.876____876.9

8.004_____7.40000 4.540_____4.05400 3.0004_____3.4000

6.000_____6 .333300_____.3333 44.444_____44.4440

Here are some problems. Write them out and line up the decimals. If you need to add some zeros.

432.8 +32.005 +1.001=

32.001+2.4+27.24=

34.87-4.49=

34.00-24.64=

44,872.876+54,853.321=_____

64,864.21-32,009.87=_____

To convert a decimal to a fraction, remove the decimal point and write the decimal over a power of ten. If the decimal goes to the tenths place, place it over ten; if the decimal goes to the thousandths place, place it over 1000. Reduce the fraction to lowest terms.

Examples: $0.45=\frac{45}{100}=\frac{9}{20}$ $0.007=\frac{7}{1000}$

Convert the following decimals into fractions.

0.23=_____ 0.11=_____0.87=_____

0.543=_____ 0.220=_____0.137=_____

4.2=_____ 5.22=_____ 8.25=_____

89.50=_____ 76.454=_____126.777=_____

Add 65.87+43.897=_____

Subtract 6484.99-0.9548=_____

Write out 36.125 in
words:_____
_____

Write two hundred thirty-seven and twenty-one hundredths in numerals
_____

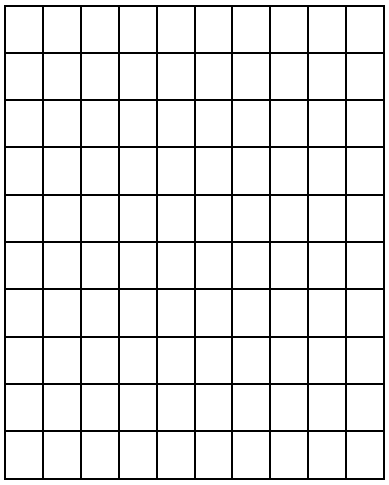
Use < > to indicate which decimal fraction is greater

3.147_____3.205 3.06_____3.059

Round 87.658 to the nearest whole number _____
Round 87.658 to the nearest tenth._____
Round 87.658 to the nearest hundredth _____

Write 0.5 as a fraction in lowest terms _____
Write 0.67 as a fraction in lowest terms_____
Write 7.85 as a fraction in lowest terms_____

Fill in 0.37



8.276-0.228=_____ 465.52-104.1=_____

To estimate the addition and subtraction of decimal fractions, first round to the nearest whole number. Then add or subtract as usual.

34.356	34
+22.511	+23
	57

Estimate the following.

42.88	54.889	549.432
+33.66	-17.99	- 17.87654

We multiplied money before, remember I said to count over how many decimal places there was in your numbers and that is how many you move over in your answer. The same is true for decimals.

4.3
X1.2
8 6
4 3 0
5 .1 6

Do the following problems and put the decimal point in the proper place.

2.21	2.5	3.1
x.15	x2.1	3.1

6.6432	4368.3216	0.87
X 0.3	x 0.2	x .04

Decimal division

You divide decimals by whole numbers the same way you divide whole numbers by whole numbers. You put the decimal point in the quotient above the decimal point in the dividend. Answers can go to the right 3,4 places unless noted. Add zeros to the dividend—ask your teacher

$$6\overline{)\,18.6}\quad 3.2$$

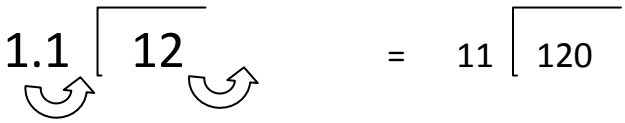
Practice

$4\overline{)\,12.8}$ $5\overline{)\,20.55}$ $2\overline{)\,84.12}$

$3\overline{)\,12.24}$ $8\overline{)\,.860}$ $6\overline{)\,4.56}$

$6\overline{)\,0.367}$ $4\overline{)\,15.48}$ $8\overline{)\,7.24}$

In decimal division, the divisor must be a whole number. The decimal point must be moved to the right until the divisor is a whole number, but you cannot make a change in the decimal divisor without making the same change to the dividend. If you moved the decimal one place to the right, you have multiplied the divisor and the dividend by 10. Place the decimal point in the quotient directly above the newly placed decimal point in the dividend. Think of the division problem 3.4 ÷ 1.2 as a fraction $\frac{3.4}{1.2}$ multiply both the numerator and the denominator by 10 to make an equivalent fraction. The new (equivalent) division problem is 34 ÷12



8. 4 ÷ 2.1=_____ 1.872 ÷ 0.36=_____

0.4712 ÷ 1.24=_____ 1.12 ÷ 8.1=_____

17.7 ÷ 0.3=_____ 12.52 ÷ 0.05=_____

Remember when we learned how easy it was to multiply by 10,100,1000, etc? just add the same amount of zeros right?

In decimals and multiplying by 10, 100, 1000 etc, you move the decimal to the right the amount of zeros. If you need to add more zeros do so.

In dividing by 10,100,1000 you move the decimal to the left the same amount of zeros. If you need to add more zeros do so.

Ex. 34.87 x 100= 3487 0.67 x 1000= 670

93.79 ÷ 100= 0.9379 643 ÷ 10000= 0.0643

4.2876 x 100=_____ 0.65 x 1000=_____

654.875 x 10000=_____ 0.654 x 10=_____

58.9x 1000=_____ 76.6 x 10000=_____

76.976 ÷100=_____ 0.654 ÷ 10=_____

65.87 ÷ 1000=_____ 7.643 ÷ 10000=_____

9.98 ÷ 10000=_____ 8.065 ÷ 100=_____

Write the following in digits:

Forty-three and seven tenths _____

One hundred twenty seven and thirteen thousandths._____

REVIEW

Write 207.426 in words

_____

_____

Write forty-seven and thirteen thousandths in numerals _____

Use < > to indicate which decimal fraction is greater 17.35 _____17.295

Round 12.769 to nearest whole number _____

Round 12.769 to nearest tenth _____

Round 12.769 to nearest hundredth _____

Write 0.36 as a fraction in lowest terms_____

Write 0.25 as a fraction in lowest terms _____

Write ¾ as a decimal number _____

Solve

36.2 + 27.325=_____

87.36-84.95=_____

4.6 x1.2=_____

3.46 x 10=_____

11.55 ÷ 7=_____

39 ÷ 12=_____

367.52 ÷ 10=_____

6.743 ÷ 100=_____

0.432 x 100=_____

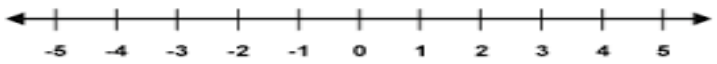
Positive and Negative numbers

On a Celsius thermometer, zero degrees is the temperature at which water freezers. A common room temperature is +20 and -10 is the outdoor temperature of a very cold winter day.

The number +20 or 20 is a positive number. You read it as positive 20 or just 20.
The number -10 is a negative number. You read it as negative ten.

You can write positive numbers with or without a + sign. BUT you MUST always write a negative sign with a negative number.

We can show positive and negative numbers on a number line.



Numbers to the left of 0 on the number line are negative. Numbers on the right of 0 are positive. The number 0 is neither positive or negative.

Whole numbers are called integers. The positive integers are +1,+2,+3… the negative integers are -1,-2,-3…..

We use integers in everyday life. For instance the ten dollars you earn for doing a job is an example of a positive integer. When you spend the money on treats. That number is the negative amount you spend.

To mark the sea floor 300 meters below sea level, we can use the negative integer -300 to mark it. To mark a mountain 3,200 feet above sea level, we use +3200.

Comparing integers

An integer on the number line is greater than those to its left and less than those to its right.

$-6 < -3 < 3$

A positive integer is always greater than a negative integer. The farther to the left of a negative integer is from zero, the smaller its value.

Practice

-3_____-2 4_____-4 -6_____-5 +3_____+6

+2_____-2 -8_____-6 +10_____8 -5_____-10

Round the following to the nearest tens

328_____ 543_____ 788_____ 99_____

Nearest hundred

432_____ 655_____ 899_____ 2342_____

Nearest thousand

34532_____ 6543_____ 8997_____54322_____

Nearest ten thousand

43233_____ 56555_____ 76888_____ 765789_____

Nearest tenth

63.87_____ 8.057_____7.009_____ 21.65_____

Nearest hundredth

654.754_____876.5328_____76.987_____0.891_____

Nearest thousandths

0.6547_____34.7623_____98.9997_____0.3289_____

$11\overline{)2432}$ $20\overline{)56740}$ $3\overline{)3.246}$

Put these decimals in order from largest to smallest:

32.45 33.4 31.55 78.1 32.09

Put these in order from smallest to largest:

3.45 76.88 2.001 3.03 3.43 03.451

Add these decimals. Fill in the zeros:

32.32+43.001+54.01=

Subtract
432.98-32.021=

75.32 x2.1=

Compare < > =

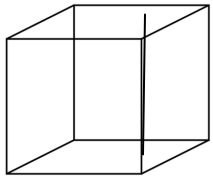
43.76_____43.99 323.876_____654.98 32.04_____32.40

678.890____678.891 432.55_____432.55 432.8_____432.0

-43_____43 -876_____-976 -876_____-887

How do we find out how much will fill a container? We need to find the volume of an object. That sort of object needs to be 3d. Imagine a cube, how much could we fit inside of it? We figured that out by using this formula Volume= length x width x height

The height inside is 3



width 3 inches To find the volume we take 3x3x2=18 inches cubed or 18 in^3

Length 2 inches

Remember V=l x w x h

What is the volume of a cube with dimensions 4 ft, 2 ft, 3 ft=_____

The dimensions are 13 in length, 9 in. width, and 2 in height. What is volume_____

Remember A=l x w What is area_____

The dimensions are 8 ft in length, 4 ft in width, and 3 ft in width. What is the volume_____

What is the area _____

6. Evan bought some new clothes. He bought eighteen shirts that cost $8 each, nineteen pants that cost $5 each, and thirteen jackets that cost $10 each. How much did he spend in all?

7. I counted all the pockets I had on my clothes today. Altogether I had 27. I had eight on my shirt and fourteen on my pants. How many pockets were on my coat?

8. George scored 155 goals playing soccer last season. This season he scored 178. What is the total number of goals George scored?

9. Sam needs to read a 567 page book for school. He has already read 147 pages. How many pages does he have left?

We have already learned about decimals and fractions are two different ways of writing the same numbers. A percent is simply another way of expressing hundredths. In a bag of 100 marbles, 25 red marbles represents 25%. To demonstrate percents, use the same hundredth models used with fractions and decimals.

The fraction $\frac{35}{100}$ is easily written as a percent = 35%

The fraction $\frac{4}{25}$ must first be rewritten as an equivalent fraction before it can be written as a percent.

$\frac{4}{25} = \frac{16}{100} = 16\ \%$

Since percents are fractions of 100, they can be written as decimal fractions to the hundredths place.

$36\ \% = \frac{36}{100} = 0.36$

Here are some examples of practical percent problems.

a) The company invited its 240 employees to a picnic, if 75% came to the picnic, how many employees showed up? (180)
b) Mike's little league team won 25% of the 16 games they played this year. How many games did they win (4)
c) Jadyn bought a computer at a 30 % discount. If the computer originally cost $1200.00 how much did she pay for it?($840)
d) If Brooklyn read 60% of her 300 page book, how many pages does she have left?(120)

Situation	Fraction	percent
30 marbles out of 100 marbles are red	$\frac{30}{100}$	30%
29 people out of 100 voted		
10 fish out of 100 fish are tropical		
7 cats out of 100 cats live indoors		
4 turtles out of 100 turtles lay eggs		
7 out of 10 puppies had spots		
17 out of 25 rules are blue		
18 out of 20 goldfish are orange		
The dress was reduced from $5 to $20		

Percent

The term percent means "per hundred". A percent compares a number to 100. For example 30 percent means 30 out of 100 or $\frac{30}{100}$. The symbol % stands for a percent. You write 21 out of 100 as 21%.

To write a percent as a decimal, remember that a percent is always in the hundredths. 35 percent is the same as 35 hundredths.

35% = $\frac{35}{100}$ = 0.35

To write a decimal as a percent, think of the decimal in hundredths. Then you can write it as a percent. 7 tenths (0.7) is the same as 70 hundredths (0.70), which is the same as 70%

.7 = 0.70 = $\frac{70}{100}$ = 70%

A quick way to write a decimal as a percent is to multiply the decimal by 100. This method words because percents are already in hundredths.

.40 = 40 %

Write the following as a percent:

.30_____ .25_____ .77_____

.98_____ .43_____ .80_____

A quick way to write percent as a decimal is to divide by 100.

40%= .40 remember how to move the decimal to the left. Since it is already at the end of the whole number you move it to the left two places for the 2 zeros.

Write the following as a decimal

60%_____ 3%_____ 22%_____

32%_____ 7%_____ 88%_____

The last way is to change them to fractions.
We are going to memorize the common ones.

25% = $\frac{1}{4}$ 50%= $\frac{1}{2}$ 75%= $\frac{3}{4}$

10%=1/10 20%=2/10 30%=3/10 etc.

20%= 1/5 40%=2/5 60%=3/5 80%=4/5

How you would solve these is to take the percentage number or the decimal number and put it over 100. Then reduce down. 25/100= $\frac{1}{4}$= 25%

Let's fill in the blanks for the fractions:

20%=_____ 25%= _____ 30%=_____

75%=_____ 50%=_____ 60%=_____

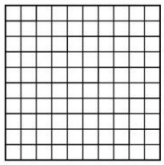
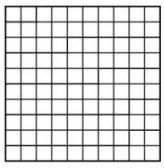
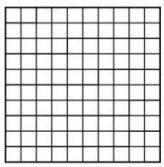
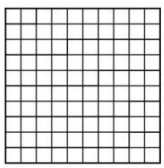
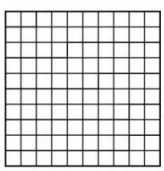
10%=_____70%+_____ 90%=_____

Finding a percent of a number

There are 432 people in our church. 45% of them are boys. How many people are boys.
To solve this we find a percent of a number. What is 45% of 432?
Let me share something with you. The word "is" means = and the word "of" means multiply(x)
When we solve these, we changed the percentage to a decimal. 45% becomes .45.
Then let's rewrite the formula. 432 x .45= Now we can solve it.

Solve:
What is 32% of 21? _____ What is 11% of 15?_____

What is 30 % of 15? _____ What is 33% of 32?_____

Draw	Fraction	Percent	decimal
			0.25
	$\frac{37}{100}$		
		18%	
	$\frac{7}{10}$		
		4%	

Average

To find the average of a set of numbers, you add up all the numbers and then divide by the number of addends. This is helpful in finding out averages of your tests. If I had 5 tests and I want to know what the average score was , I would add them all up and divide by 5.

Find the average of the following numbers:

5 3 6 8 3 2

_____

21 30 20 77

_____

32 41 5 7 2

_____

Now if you want to find out what the mean of your numbers is---the middle number you line up your numbers and get the middle number.

If you want to find out what the mode is---the number that shows up the most, you can see that by lining them up.

The range is the difference between the highest and lowest number is

8 2 4 1 2 5 7

First line them up: 1 2 2 4 5 7 8
The mode is= 2 most often found
The mean is 4 the middle number
The range is 7 the difference between 1 and 8
The average is 29 divided by 7 (you can do that)

Find me the following:

2 1 3 6 12 7 9

Mean_____ Median_____ Mode_____Average_____Range____

Review from yesterday and solve:

1 1 2 3 4 3 5

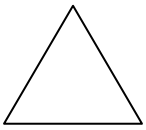
Mean_____ Median_____ Mode_____Average_____Range____

4 4 5 3 3 6 5 1

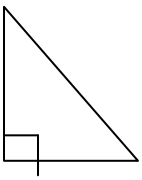
Mean_____ Median_____ Mode_____Average_____Range____

Kinds of triangles

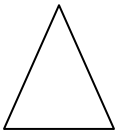
Triangles have three interior angles. An equilateral triangle has three sides of the same length.



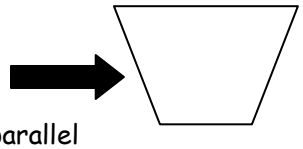
A right triangle has one right angle. A right angle is 90 degrees that square box means that it is a right angle



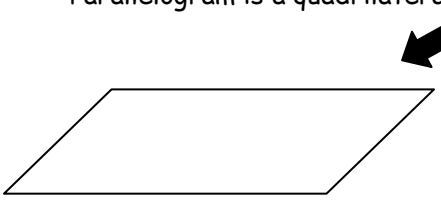
An isosceles triangle has at least two sides of the same length.



A polygon is a closed figure made out of three or more line segments. Triangles are three sided polygons. Four sided polygons are called quadrilaterals. (quad means 4)
A rectangle is a quadrilateral
A trapezoid is a quadrilateral it looks like a triangle with its head cut off



Parallelogram is a quadrilateral in which both pairs of opposite sides are parallel



This is a rhombus another quadrilateral

Plug in the answers. Remember of means to multiply and is means equal

What is $\frac{1}{2}$ of 8=

What is 2/3 of 4=

What is 1/7 of 24=

what is $\frac{3}{4}$ of 60=

What is 1/8 of 28=

what is $\frac{1}{4}$ of 50=

Write the following as a percent

.21_____ .89_____ 32.39_____ 31.98_____

Write the following as a decimal

75%_____ 23%_____ 125%_____ 1/5_____

$\frac{3}{4}$_____ 2/5_____ $\frac{1}{4}$_____ 1/10_____

Write as a fraction

75%_____ 5%_____ 20%_____ 25%_____

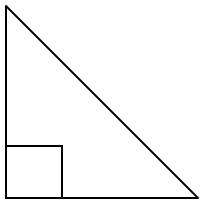
Put these integers in order from least to greatest:
0, 1, -2 ___ ____ ___

1, -2, 0, -1 ___ ____ ____ ____

Area of a triangle

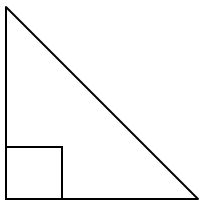
To find the area of a triangle, you need to multiple the base times the height and divide by 2

Area of triangle=(b x h) ÷ 2

7in 

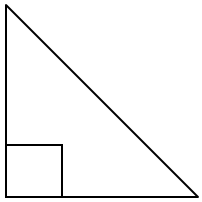
4 in

A=_____in^2

9ft 

6ft

A=_____

10cm 

5 cm

A=_____

3in 

8 in

A=_____in^2

7ft 

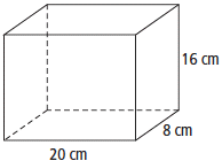
12 ft.

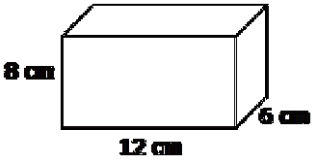
A=_____

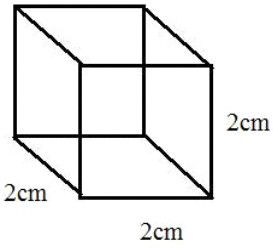
9cm. 

15 cm

A=_____



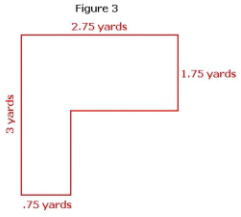




V=_____$cm3$

V=_____

V=_____



Perimeter =_____

Thermometers.

Go look at our thermometer on the deck and write down what the temperature is like outside right now._____F°

Everyone's body has a normal body temperature. If you were to take your temperature right now and you were healthy it should be 98.6 degrees F.

The temperature at which water boils is 212 F.

Water freezes at 32 degrees Fahrenheit.

Learn these☺

Circle the best possible answer.

It is a beautiful, perfect sunny day here in North Carolina. It is most likely:

40F 80F 100F

It is starting to snow outside. The temperature is:

75F 55F 32F

We are going to go swimming. The temperature of water for a refreshing swim would be:

65F 35F 90F

I am sick. I am running a low grade fever. What is my temp?

98.6F 130F 100F

I need to boil some water for coffee. How hot will my water be?

200F 98F 212F

Measuring.

Choose one of the following as a choice to measure with.

Gallons cups pints quarts

Amount of water used to take a shower_____

Amount of flour to make bread_____

Amount of water to fill your pool_____

A single serving of yogurt_____

A container of motor oil_____

Fill in circles with +, -, x, ÷

3 ◯ 3 ◯ 3 = 9

3 ◯ 3 ◯ 3 = 3

3 ◯ 3 ◯ 3 = 2

5 ◯ 5 ◯ 5 = 50

5 ◯ 5 ◯ 5 = 5

5 ◯ 5 ◯ 5 = 30

3 digit divisors----you will use a calculator in life☺ But you need to know how to do this.

179 | 872267

123 | 144279

548 | 940368

269 | 507872

Lets go over some units of length

We are one of the fewest countries in the world that use the standard measuring system. Most everyone else uses the metric.

We measure:

- Inches (in.) width of your thumb
- Foot (ft.) length of ruler, 12 inches
- Yard (yd.) a long step, 3 ft or 36 inches.
- Miles (mi.) distance walked in 20 minutes 5280feet

Metric system:

- Millimeter (mm) thickness of a dime
- Centimeter (cm) thickness of little finger tip, 10 millimeters
- Meter (m) a little over a yard 100 cm
- Kilometer (km) distance walked in 12 minutes, 1000 meters

Lets grab the ruler. Look at the metric side. It is divided into centimeters. There are 100 centimeters in 1 meter. Each centimeter is divided into 10 millimeters. So 1 centimeter equals 10 millimeters.

Measure this line in metric

_____ how long?_____

_____ how long?_____

Measure in inches

_____ how long?_____

_____ how long?_____

Which of these units is most appropriate for measuring the length of a pencil?

Inches yards miles

Which is best for measuring distance between two towns?

Centimeters meters kilometers

Which of the following would most likely be measured in meters?

A pencil a highway a hallway

Which would be best for measuring the width of a toothpick?

Inch millimeter yard

Which would be best for measuring an ant?

Meter centimeter feet

Hundred trillions	Ten trillion	Trillions	Hundred billsions	Ten billions	Billion	Hundred millions	Ten millions	Millions	Hundred thousand	Ten thousand	Thousand	hundreds	tens	ones

Remember we separate large numbers by commas. Begin on the right hand side and put one after every 3 digits. Having commas will help you understand which section you are in. The billions, million, etc.

In the following number, which digit is in the hundred-millions place?_____

765,876,000,876

Use digits to write the number two trillion, three hundred fifty billion.

_____

Use digits to write four hundred fifty five billion, four hundred twenty million.

_____

Read this number to your teacher: Add commas to help you

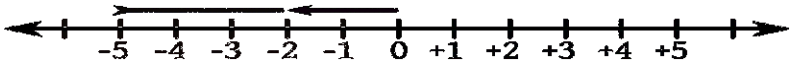
765987654324980

900877000765000

What is the temperature of your body?_____

What is the temperature at which water boils?_____

What is the temperature at which water freezes?_____



Use the number line and subtract 4 from 3=

3-4= start at the three and move to the left 4 places. You get -1.

If you were to type this on to a calculator it would give you the same answer. Try it.

From yesterday lets subtract integers on the line.

What number is 7 less than 4?_____

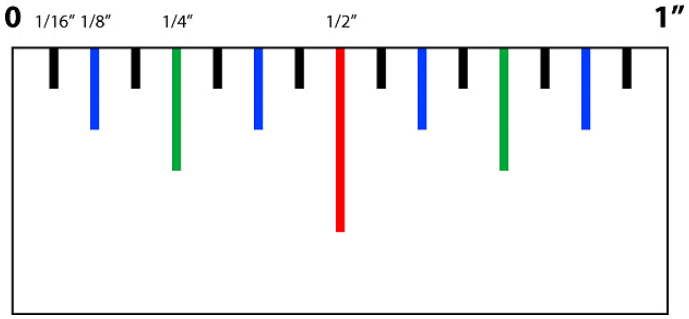
What number is 5 less than 0?_____

What number is 10 less than 5?_____

5-8=_____

1-5=_____

Ruler Diagram: 1 inch



The above is a cut out from a ruler. We see that the inch can be divided in half (the middle). Then those halves can be divided in half again, giving you 1/4s. they are the green ones. You can then divided the quarters up again into 1/8s . Then divide that into 1/16ths.

If you read the ruler it goes 1/16th 1/8 (2/16) 3/16 ¼ (4/16) 5/16

3/8 (6/16) 7/16 ½(8/16) 9/16 5/8(10/16) 11/16 ¾ (12/16)

13/16 7/8 (14/16) 15/16 1 inch

Learning how to read this. Notice the equivalent fractions how they are reduced down to simpler terms.

Practice measuring these lines with nearest sixteenth of an inch.

_____ _____in

_____ _____in

_____ - ____in

Prime numbers

Remember that a factor is one of the numbers multiplied to form a product.

2 x 3= 6 both 2 and 3 are factors

1 x 6=6 both 1 and 6 are factors

We see that each of the numbers 1,2,3, and 6 are factors of 6. Notice that when we divide 6 by 1,2,3 or 6, the resulting quotient has no remainder. We say that 6 is divisible by 1,2,3, and 6.

FACTORS of a given number are the whole numbers that divide the given number without a remainder.

Ex:

What are the factors of 10? Go through all the numbers up till 10 to see what will divide evenly.

The factors of 10 are all the numbers that divide 10 evenly with no remainder. They are 1,2,5,10

Ex: What are the factors of 12?

1,2,3,4,6, and 12

PRIME NUMBERS --now when we have a number that is divisible by 1 and itself only we say that the number is PRIME.

Ex. 2 can be only divided by 1 and 2. Thus the number is PRIME
3 can be only divided by 1 and 3. Thus the number is prime.

4 can be dived by 1, 2, and 4 so it is COMPOSITE

Is the number 5 prime?_____

Is the number 6 prime?_____

Is the number 7 prime?_____

Is the number 8 prime?_____

Is the number 9 prime?_____

Remember making trees for numbers?

When we do the trees and get the factors, for example:

The factors of 8 are 1,2,4,and 8

The factors of 12 are 1,2,3,4,6, and 12.

We see that the factors that they both have in common are 1,2,4. Their greatest common factor---the largest factor that they both have is 4. GCF is 4.

This is helpful in finding like denominators in fractions.

Find the GCF for 12 and 18?_____

Find the GCF of 6, 9, and 15_____

Find 15 and 25_____

Find 20, 40, and 60_____

Remember when we were trying to figure out if a number was divisible by something in our long division?

Which of these is divisible by 2?

365 1179 1556

Which of these is divisible by 3?

365 1179 1556

Which of these is divisible by 5?

355 872 876

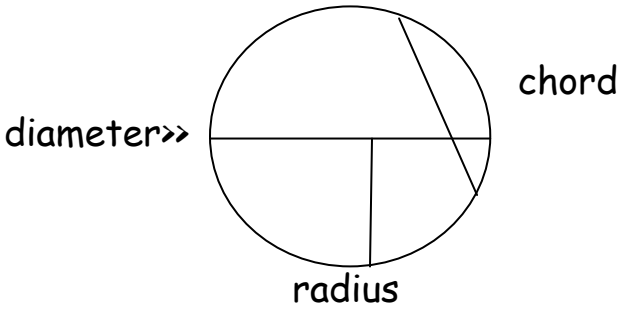
A ratio is a way to describe a relationship between numbers. If there are 6 girls and 4 boys in our family, then the ratio of boys to girls is 4:6. Or 4 to 6 or $\frac{4}{6}$

In a youth group full of 27 students, there are 14 boys. What is the ratio of boys to girls in the group?_____

CIRCLES

There are several ways to measure a circle. We can measure the distance around the circle, the distance across the circle, and the distance from the center of the circle to the circle itself.

If you were to draw a line through the center from one side to the other that would be called the diameter.
If you were to draw a line segment from one corner to another corner that would be called a chord.
A radius is half of the diameter. It is the distance from the center point to the edge of circle.



The circumference is the distance around the circle. The distance is the same as the perimeter of a circle.

If the radius of a circle is 4 cm. What is the diameter?_____

If the diameter of a circle is 10 in. what is the radius?_____

GEOMETRY

In mathematics, a plane is a flat surface such as a tabletop or a sheet of paper. When two lines are drawn in the same plane, they will either cross at one point or they will not cross at all. When lines do not cross but stay the same distance apart, we say that the lines are parallel. When the lines cross, we say they intersect. When they intersect and make square angles, we call them perpendicular lines.

Draw 2 parallel lines

Draw perpendicular lines

Ask mom about a protractor and a compass

Where lines intersect, angles are formed. Rays make up the sides of an angle. The rays originate at a point called the vertex of the angle. Draw me a right angle, acute, and an obtuse angle.

AREA of a rectangle. We know that to find the area of something you multiple the length times the width. A=l x w

The surface of the floor is covered with tiles. We need to know how many tiles to buy for the floor if it measures 12 ft by 7 foot. What is the area?

_____ sq feet. (why do we use square feet for the unit of measure)

What is the area of a rectangle 8m by 5 m?_____

What is the area 12 m by 12 m?_____

The area of a square is 25 square inches. How long is each side of the square?_____

Paper that is used in school is often 11 inches by 8 ½ inches. What is the perimeter of the paper?_____

ROOTS AND SQUARE ROOTS

When you see this expressing 5^2 it means "five squared" . The 2 represents an exponent. An exponent shoes how many times the other number, the base is to be used as a factor. In this case the base=5 is to be multipled 2 times.

5 x 5=25

Lets keep working on more.

What is 2^3 ? This is read as 2 cubed or two to the 3rd power.

Solve it by 2 x 2 x 2=8

Practice

2^3=_____ 10^2=_____ 3^3=_____

4^2=_____ 5^3=_____ 1^5=_____

Simplify

$3^2 + 2^3$=_____

Here is another concept. The square root of something.

$\sqrt{25}$ = Which number when multiplied by itself gives you 25? 5 x 5= 25. The answer is the square root of 25 is 5.

It is helpful to learn the squares of numbers.

2 x2=4 3x3=9 4x4=16 5x5=25 6x6=36 7x7=49 8x8=64
9x9=81 10x10=100 11x11=121 12x12=144

This will help you to recognize your answers easily. You can also type it in on a calculator as well. This is helpful especially when you have a number that you do not recognize.

$\sqrt{36}$=_____ $\sqrt{81}$=_____ $\sqrt{49}$=_____ $\sqrt{100}$=_____ $\sqrt{4}$=_____

When you see something like ...

$$7 + (6 \times 5^2 + 3)$$

... what part should you calculate first?

Start at the left and go to the right?
Or go from right to left?

Warning: Calculate them in the wrong order, and you will get a wrong answer !

Here are some rules to memorize regarding the order of operations to solve problems that mix the four operations.

PEMDAS

P= do all the parentheses first

E=do any exponents= 3^2

MD=do all your multiplication and division next

AS=lastly do addition and subtraction

Solve the following:

(a +b) x c=_____

Clues:

a=the number of stripes on the US flag

b= the number of wheels on a tricycle

c= the number of people in a set of twins

Solve:

(d-e) x f=_____

d=the age you must be to vote in the US

e= the number in a baker's dozen

f= the number of days in a week

Solve the following using PEMDAS

$(7 \times 4) \times 5 - \sqrt{9} =$

2) $(\sqrt{36}) - 11 =$

3) $(6 \div 2) + 4 =$

4) $(6 + 9) - 5 =$

5) $(16 \times 9) \div 4 =$

6) $(9 - 3) \div 2 =$

7) $(3^3) + (7x2) =$

8) $(5 + 4 - 6)^2 + 4 =$

9) $(12 + 13 - 17) =$

10) $(21 + 23 - 32) =$

11) $(4 - 9) \times 7 =$

12) $(13 + 8 + 9) =$

13) $(15 \div 3) \times (6 \times 3) \div 5 =$

14) $(6 + 7 \times 3 \times 4) =$

15) $21 + (19 - 11 - 12) =$

16) $13 - 22 + (6 \times 8) + 12 =$

17) $17 + (18 \div 9 - 4) - 3 =$

18) $(15 - 13) - 19 =$

19) $(7 \times 8 \div 4) + 11 + 5 =$

20) $(12 \div 4) + 11 =$

REVIEW

Write 15% in decimal form _____

What number is 75% of 20_____

Write 75% as a reduced fraction_____

If I got 80% of my questions correct on my quiz of 25 questions. How many did I get correct_____

We have learned how to multiply decimals.

  0.25
X0.04
0.0100

Type this same problem on a calculator and see the answer they give you?_____.01

The calculator simplifies the answer by removing unnecessary zeros. Zeros at the end of a decimal number do not affect the value of the decimal number. Each of these decimal numbers has the same value because the 4 is in the tenths place:

0.4 0.40 0.400

Although 0.4 is the simplified form, sometimes it is useful to attach extra zeros to a decimal number. For example, comparing decimals can be easier if the numbers being compared have the same number of decimal places.

0.3_____0.303 by adding zeros it makes it visually easier 0.300_____0.303

Write these numbers in simplified form:

0.0500_____ 40.00_____ 1.2500_____

Write in order from greatest to least

0.12, 0.125, 0.015, 0.2 _____ _____ _____ _____

One mile is 5280 feet. How many feet in 5 miles?_____

6.74 + f= 11.025 what is f_____

Which of the following is closest to 1?_____

0.1 0.8 1.1 1.2

$5\overline{)\$2.25}$ $3\overline{)4.2}$ $3\overline{)0.24}$

Circumference Pi π

To find the circumference of a circle (the perimeter around the circle) we multiple the π x diameter. What is π? That symbol is a calculation that a mathematician figured out so that you could find the circumference of a circle. You call it Pi (pie) it is equal to 3.14 rounded. There are more numbers that go with it. But under normal circumstances you use 3.14. you can push it on a calculator and it will show you more numbers.

As with area and perimeter of things, you plug in the numbers to the formula. If you know the formula its easy.

If the diameter of a circle is 2 inches to figured out the circumference, you take (3.14) x 2=

6.28 in.

If you don't know the diameter but you know the radius—remember the diameter is half the diameter. So if you had a radius of 3, the diameter is 6.

Solve: the circle radius is 3 cm. What is the circumference?_____

The circle diameter is 10 ft. What is the circumference?_____

The radius is 2.5 in. What is the circumference?_____

Rounding of decimal numbers

We know how to round whole numbers, but now we will learn how to round decimals. It is the same concept.

Sometimes it is helpful to round decimal numbers, especially when using money amounts. Because money only goes to the hundredth of a decimal.

$6.89
X0.6

0.5512 Look at the number you are rounding---the hundredths place and see if the number to the right is 5 or more then round up if not stay at the number.

Round the following dollar amounts

$125.456_____ $54.9879_____ $2.019_____

$3.9801_____ $3.559_____ $1.048_____

Write the number 3,512,243,200 in words:

_____

_____

Subtract the following from the number 4,872,038

4,000_____

20,000_____

600,000_____

Round 38.463 to the nearest tenth_____

To the nearest ten_____

To the nearest hundredth_____

Draw a triangle with the following specifications:

- $\overline{AB}$ is perpendicular to $\overline{AC}$
- $\overline{AB}$ is 10 cm.
- < ACB is 45 degrees

What is the type of triangle_____

Calculate the area. IF $\overline{BC}$ is 12 cm. What is the perimeter?_____area_____

Multiply

78 x 3=_____ 43,877 x 1000=_____41,285 x 211=_____

What is 6^4_____$\sqrt{25}$=_____

Decimal Fractions

The gram (weight or mass), liter (liquid), and meter (length) constitute the basic units of measurement in the metric system. Smaller units are identified by the prefixes deci, centi, and milli. Larger units are identified by the prefixes deca, hector, and kilo. One meter is divided into 10 decimeters (also known as 0.1) of a meter). The meter is further divided into 100 centimeters and 1,000 millimeters.

To change to a smaller unit in the metric system, multiply by 10 for each box you move to the right. Move the decimal point one place to the right for each box.

Example: decimeters to millimeters is two boxes to the right. Multiply by 100.

2.3 x 100= 230 2.3 dm- 230 mm.

To change to a larger unit in the metric system, divide by 10 for each box you move to the left. Move the decimal point one place to the left for each box.

Example: decimeters to hectometers is three boxes to the left. Divide by 1,000.

5 ÷ 1,000= 0.005 5 dm = 0.005 hm

km kilometer	hm hectometer	da dekameter	mm millimeter	dm decimeter	cm centimeter	mm millimeter
1,000m	100 m	10 m	1 m	0.1 m	0.01 m	0.001 m
thousands	hundreds	tens	ones	tenths	hundredths	thousandths

Lets practice:

80 km _____dm 16 mm_____dm 7.1 hm_____cm

5.32 hm_____m 4.6dam_____dm 0.01 dm_____km

0.01 hm_____mm 9 m_____dam 2,340,000mm_____km

Do the following decimal problems. Remember to line up the decimals and add any zeros to make it easier.

43.876 + 3.1 + 276.965=_____

6.8735 – 1.083691=_____

65.54 x 2.1=_____

0.865 x 2.4=_____

8.405 ÷ 5=_____

Review decimals--fractions

0.45 + 0.96 + 0.52=_____

26.3 – 4.7=_____

Use < or > to compare:

5.01_____5.003 6.15_____6.015 3.05_____5.03

Write sixty-two hundredths _____

Round 27.553 to the nearest tenth_____

Round 62.815 to the nearest hundredth_____

Round 4.7639 to the nearest thousandth_____

Write 0.05 in words_____

Jenny sold 7 ½ flats of berries at the market. Stephen sold 2 2/3 times that many. How many flats did Stephen sell?_____

Corey bought a 8 ¼ ounce jar of jam at the market. Jentzen bought a jar that was ¾ the size. How many ounces did Jentzen buy?_____

Evan sold 15 heads of lettuce. Each weighed 2 4/9 pounds. How many pounds of lettuce did he sell all together?_____

Sam fixed 2/3 of the box of pancakes for breakfast. Each pancake consisted of 1/8 of the batter that he mixed. How many pancakes was he able to make?_____

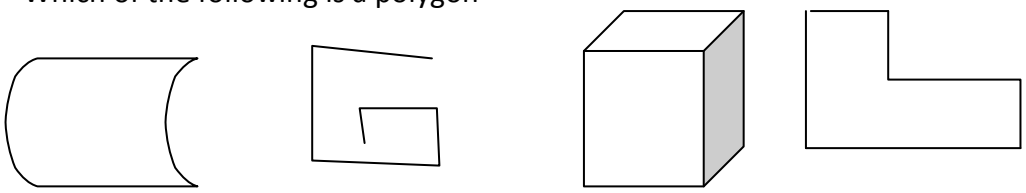
There is 5/9 of the watermelon left to enjoy. If our family cuts up and eats 4/8 of it at a time, how many times will it take our family to finish it?_____

½ ÷ 5=_____- 3/7 ÷6=_____ ¼ ÷ 3=_____

3 ½ x 2 1/3 =_____ 37 – 3/11=_____ 18 1/3 +12 1/3=_____

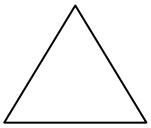
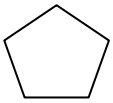
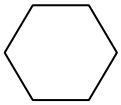
Polygons are closed, flat shapes with straight sides.

Which of the following is a polygon



The last one is a polygon because it is the only closed, flat shape with straight sides.

Polygons are name by the number of sides they have. Two sides of a polygon meet or intersect at a vertex. A polygon has the same number of vertex as sides.

Shape	Number of sides	Name of polygon
	3	Triangle
	4	Quadrilateral
	5	Pentagon
	6	Hexagon
	8	octagon

What is the name of a polygon that has 4 sides?_____

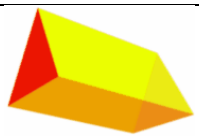
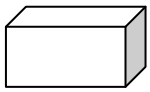
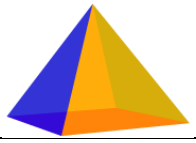
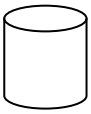
Correct answer is quadrilateral. Squares and rectangles are names of one kind of quadrilateral.

An octagon has a perimeter of 96 inches. How long is each side?_____

Can a polygon have 9 sides?_____

What is the name of a corner of a polygon?_____

Polygons are two-dimensional shapes. They have length and width, but they do not have height (depth). The objects we encounter in the world around us are three-dimensional. They are called geometric solids.

Shape	name
	Triangular prism
	Rectangular prism
	Cube
	Pyramid
	Cylinder
	Cone
	sphere

Which object has the same shape as:

Cone_____

Pyramid_____

Cylinder_____

Sphere_____

Rectangular prism_____

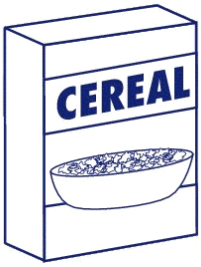
Triangular prism_____

Solids can have faces, edges, and vertices (plural of vertex).

The face is the flat surface of the object. Edge is line where two faces meet. Vertex is point where three or more edges meet.

 Pyramid

How many faces_____how many edges_____how many vertices_____



a cereal box has 6 faces, but not all the faces are the same area. The front and back faces have the same area; the top and bottom faces have the same area; and the left and right faces have the same area. Lets say this box is 10 cm tall, 7 inches wide, and 2 inches deep.

What is the area of the front of the box?_____

What is the area of the top of the box?_____

What is the area of the right panel of the box?_____
combine the areas of all six faces to find the total surface area of the box._____

Remember the volume?

We can measure how much space the solid occupies. The formula is V=l x w x h Just plug in the numbers.

A cube with 2 cm for sides. What is the volume?_____cm^3

A Rectangular prism length—12 in, width 5 inch, and height 6 inch. What is volume_____

How many faces are on a cylinder?_____

How many faces are on a cube?_____

How many edges to a cube?_____

Adding 3 fractions.

Do the same thing for adding two, but you need to find a common denominator for all 3.

Add ½ + ¼ + 1/8 =_____(line them up vertically)

Add 1 ½ + 2 1/3 + 3 1/6=_____

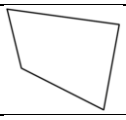
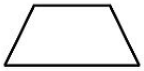
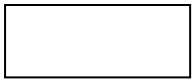
The Pentagon in Washington DC is the world's largest office building. Each of the five sides are 921 feet long. What is the perimeter of the Pentagon? In feet_____ in yards_____

What time is 2 ½ hours after 10:15 am?_____

Write the number 4 2/3 as an improper fraction?_____

How much money is 60% of $45?_____

Classify quadrilaterals . Quadrilaterals are polygons with four sides. We can classify quadrilaterals by the characteristics of their sides and angles.

	No sides parallel	Trapezium
	One pair of parallel sides	Trapezoid
	Two pairs of parallel sides	Parallelogram
	Parallelogram with equal sides	Rhombus
	Parallelograms with right angles	Rectangle
	Rectangle with equal sides	square

A regular hexagon has a perimeter of 36 inches. How long is each side?_____

2 x 0.4_____ 2 + 0.4

There are 100 centimeters in one meter. How many centimeters equal 2.5 meters?_____

16.6 mi + d = 26.2 mi d=_____

Write 75% as an unreduced fraction?_____then write as a decimal?_____

Amy and her friends at church decided to make ribbons for their friends to wear for the party. Amy's mother bought 2 rolls of ribbon. Each ribbon is 25 yards in length and the ribbons are cut to 7 ½ inches long, how many ribbons can they make to give away? 1 yard=36 inches.

_____

Multiplying 3 fractions. Do the same as you would for 2, just reduce down before you multiply.

2/3 x 1 3/5 x ¾=_____ rewrite it with improper fractions

Multiply 2/3 · 4/5 · 3/8=_____notice that it is (dots) instead of x—it also means to multiply and is easier to use especially if you are doing algebraic problems.

Solve:

2 ½ · 1 1/10 · 4=_____

Four tablespoons equals ¼ cup. How many tablespoons would equal one full cup?_____

The diameter of a circle is 1 meter.

The circumference is how many centimeters? (use 3.14 for π)_____

Simplify: 100- 10^2=_____

Write 0.5 as a common fraction_____

Write 3.75 as a mixed number_____

Convert ¼ to a decimal number?_____

Use a calculator to convert 16/18 to a decimal number_____

Use a calculator and convert 7/20 to a decimal number_____

Convert 31/32 to a decimal number_____

Convert 3 and 24/64 to a decimal number_____

Measure liquids in the US
1 gallon=4 quarts
1 quart= 2 pints
1 pint=2 cups
1 cup =8 ounces
Metric system 1 liter=1000 millimeters
Answer:

A half gallon of milk is how many pints of milk?_____

A 2 liter bottle of soda has a capacity of how many millimeters?_____

A half gallon of juice will fill how many 8 ounce cups?_____

Area of a triangle. Remember the formula for finding the area of a triangle? A=1/2 bh

That says area equals half the base times the height.

To find the area of a parallelogram it is A=bh area equals base times height.

Find the triangle area: base of 8 cm, height 4 cm=_____

Right triangle has a base of 10 ft and height of 6 ft. The other side is 7 ft. what is the area?_____

Mr Maryon was 38 years old when he started his job. He worked for 33 years. How old was he when he retired?_____

Ninety percent of 30 trees are elm tree. How many trees are elm trees?_____ what is the ratio of elm trees to all the other trees?_____

Eighteen of the twenty-four runners finished the race.

1. What fraction of the runners finished the race_____
2. What fraction of the runners did not finish the race_____
3. What percent of the runners did not finish the race_____

6n= 0.12 what is n_____

5 n= 10^2 what is n_____

Add ½ + 1/5 + 1/10=_____

PROPORTION

If apples are on sale for 3 pounds for $4 than the ration ¾ expresses the relationship between the quantity and the price of apples. Since the ratio is constant, we can buy 6 pounds for 8 dollars, 9 pounds for 12 dollars and so on.

A proportion is a true statement that two ratios are equal.

$\frac{3}{4}=\frac{6}{8}$

We read this proportion as “three is to four as six is to eight”

Which ratio forms a proportion with 2/3?

2/4 ¾ 4/6 3/2

Write this proportion: four is to six as six is to nine

_____

When we have proportions, how can we tell if they are really proportions.

You multiply in a X and if you get the same number it is a proportion

Ex Do these two ratios form a proportion?

$$\frac{8}{12}, \frac{12}{18}$$

8 x 18= 144 and 12 x12= 144

The answer is yes the two ratios form a proportion.

Solve: $\frac{6}{9}=\frac{10}{m}$ multiply across 6m=90 To get m by itself you have to get rid of the 6. If you divide that side by 6 it cancels itself out and then divide the other side. 90÷6= 15

Use cross products to determine whether each pair of ratios form a proportion:

$\frac{6}{10}, \frac{7}{11}$ _____

$\frac{6}{8}, \frac{9}{12}$ _____

$\frac{6}{10} = \frac{9}{x}$ x=_____

$\frac{12}{16} = \frac{y}{20}$ _____

We learned the circumference of a circle, now we will learn the area. The formula for area of a circle is πd=area pi (3.14) times the diameter gives you the area.

Solve the area of a circle if the diameter is 9cm_____cm^2

Label it correctly.

Solve the area of a circle if the radius is 2ft_____

Solve the following: have Mom show you

5n= 21 n=_____ 5 +m= 12 m =_____

0.6m= 0.048 m=_____ 45= 4x x=_____

3m=21 m=_____ 2y-4=16 y=_____

¼ of an inch of snow fell every hour during the storm. How many hours did the storm last if the total accumulation was 4 inches?_____

Don't forget to label properly:

Find area of triangle with base 18 mm, side 10mm, height 8 mm. _____

What is the volume for rectangular prism length 6 inch, width 10 inch, height 8 inch.

_____

Use your calculator and solve:

$\sqrt{169}$=_____

$\sqrt{484}$=_____

$\sqrt{40}$=_____

$\sqrt{80}$=_____

$\sqrt{70}$=_____

Write this in exponential form:

10 x 10x10=_____

12 x 12 x 12 x 12=_____

3 x 3 x 3=_____

Write 7,245,098.08 in words _____

_____

_____

Round 3,457.189….

To nearest hundredth_____

To nearest whole number_____

d x 14= 56 d=_____

792 x 34=_____-

2^5=_____

Divide 653 by 23=_____ 50 hours=_____days or _____hours

15 + 3 x 2=_____ 0.148 x 0.7=_____ 15.47 divided by 2.6=_____

3/5 x 10/8=_____ 17 – 5 ½ =_____ 14 is _____% of 20

-6 + 9=_____

Let me teach you about subtraction of integers. We know to add if the signs are the same we add them if they are different we subtract them.

Solve with moms help. For subtraction you change the sign of the subtract and then change the next integers sign. If it is positive you put it negative. If it is negative you change it to positive.

10- (-2)= 7 – (-4)= -18-9=

83- (-21)= -5 – (-8)= -32-(-10)=

65-(+24)= -3 – (-3)= 43 – (+43)=

Writing expanded notation.

The speed of light is about 186,000 miles per second. Write 186,000 in expanded notation using exponents.

186,000= $(1 \times 10^5) + (8 \times 10^4) + (6 \times 10^3)$

Write 2, 500,000 in expanded notation using exponents_____

Remember PEMDAS the order of operations

Simplify

$5 - (8+8) \div \sqrt{16} + 3^2 \times 2$

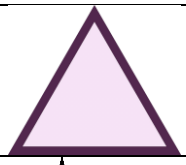
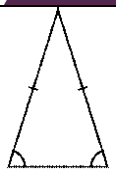
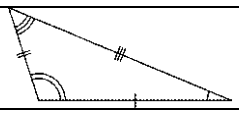
Solve according to PEMDAS. Rewrite it out every step of the way.

$2 \cdot 3^2 - \sqrt{9} + (3 - 1)^2$

Arrange in order from least to greatest:

1, 0, 0.1, -1 _____

Types of triangles ---classification

Equilateral triangle		All three sides are equal length
Isosceles triangle		At least 2 of 3 sides are equal in length
Scalene triangle		All 3 sides have different lengths

One side of an equilateral triangle measures 15 cm. What is the perimeter of the triangle?_____

An equilateral triangle is also an acute triangle? T or F

Two sides of a triangle measure 3 inches and 4 inches. If the perimeter is 10 inches, what type of triangle is it?_____

Every right triangle is a scalene triangle? T or F

$10 + 6^2 \div 3 - \sqrt{9} \times 3$ simplify _____

Round the decimal number one hundred twenty-five thousandths to the nearest tenth

_____

Write the number in standard notation:

$(7 \times 10^8) + (2 \times 10^5) + (5 \times 10^2)$ _____

$8.47 + 95 cents + $12=_____

37.5 x 100=_____ 453.2 ÷100=_____

If ninety percent of the answers on a test were correct, then what is the percent that were incorrect?_____

When the sum of 2.0 and 2.0 is subtracted from the product of 2.0 and 2.0 what is the difference?_____

What is the name of the quadrilateral that has one pair of sides that are parallel and one pair of sides that are not parallel?_____

Write 0.15 as a percent?_____

Solve for n

4n= 6 ·14 n=_____ 0.3n= 12 n=_____

$\frac{6}{9}=\frac{36}{w}$ w=_____ $\frac{3}{4}=\frac{15}{w}$ w=_____

How many quarter-pound hamburgers can be made from 100 pounds of ground beef?-_____

On the Fahrenheit scale water freezes at 32 F and boils at 212 F. What temperature is halfway between the freezing and boiling temperatures of water?_____

Write 2 ¼ as a percent_____- Write 0.8 as a percent_____

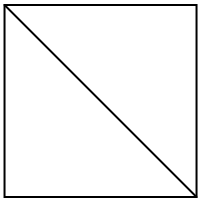
In one minute the second hand of a clock turns 360 degrees. (all the way around). How many degrees does the minute hand of a clock turn in one minute?_____

6 ¾ + 5 $\frac{7}{8}$=_____ 6 $\frac{1}{3}$ - 2 ½ =_____

Solve for b

b + 50 + 70 + 180 b=_____

The perimeter of a square is 48 inch. What is the area of one of the triangles _____



$A = \frac{bh}{2}$

What is the reasonable time it would take for you to run 1miles?

8 minutes 20 minutes 1 hour

DEGREES

If you were to stand up and make a complete turn around, you would turn around 360 degrees. If you were to turn halfway you would turn 180. If you were to look to your right over your shoulder you look 90 degrees. Just some FYI for future geometry lessons

If you were to add up the sum of the interior angles of a triangle they ALWAYS equal 180 degrees.

If you were to add up the sum of the interior angles of a quadrilateral they will ALWAYS equal 360 degrees.

Then if you are given two measures of angles for a triangle, you can solve for the other one.

If I give you <B is 80 degrees, < C is 40 degrees , then <D is _____

The quadrilateral measurements are <X 110, < D 80, <C 80, what is the measurement of

< M_____

A foot-long rope can be cut into how many 1 ½ inch sections?_____

Nine months is what fraction of a year?_____

If you are facing east and turned counterclockwise 180 degrees, where are you facing_____

If you are facing north and turned 90 degrees clockwise, where are you facing_____

If you are facing south and turn 360 degrees clockwise, where are you facing_____

If the sales tax is 7% what is the tax on $125.99 purchase?_____

If the sales tax is 5.6% what is the tax on $65.78 purchase?_____

The ratio of football players to cheerleaders was 5 to 2. If there were 80 football players how many cheerleaders were there? Write out the ratio to solve

If I used nuts and cranberries in a ratio of 2 to 3. If I mixed in 20 ounces of nuts, how many cranberries did I mix in?_____

If the diameter of a circle is 1 ½ inches, what is the radius?_____

What is the circumference of the circle above_____

-3 – (-4)=_____ +2- (+2)=_____

-5-(-5)=_____ -43+ - 18=_____

542.87 x 0.36=_____ 432.89 x 1000=_____

0.0732 x 1000=_____ 0.087003 x 1000=_____

We use the standard measuring system for weight. Pounds and ounces. An envelope and letter= 1 ounces

Shoe= 1 pound

Small car = 1 ton

16 ounces= 1 pound 2000 pounds= 1 ton

For the metric system we measure the mass of objects in milligrams (mg), grams (g), and kilograms (kg).

Grain of salt= 1 mg

Paper clip= 1 gram

Text book= 1 kilogram

1000mg= 1 g 1000 g= 1 kg

Answer:

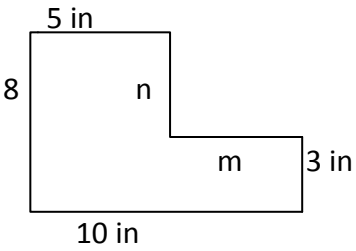
Half of a kilogram is how many grams?_____

The mass of a liter of water is 1 kilogram. So the mass of 2 liters of water is how many grams?_____

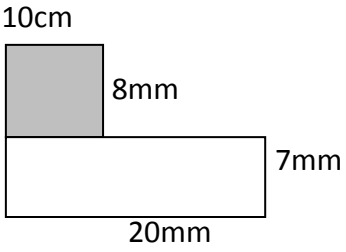
A half-ton pick up truck can haul a half-ton load. Half of a ton is how many pounds?_____

Two kilograms is how many grams?_____

Find the perimeter of this figure



How can you find the length of the sides? Solve for n and m and then find the perimeter_____



What is the area of the shaded figure_____

What is the combine area of both figures_____

What is the perimeter_____

Make sure that you label correctly

Simplify

-2 + -3 - -4 + -5=_____

-3 + (+2) - (+5) - (-6)=_____

2 + (-3) - (-9) - (+7) + (+1)=_____

-10 – (+20) - (-30) + (-40)=_____

You weighed 7 lbs 8 oz at birth. When you were 3 months old you weighed 12 lb 6 oz. how much weight did you gain?_____

There are 8 fish and 11 snails in the aquarium. What is the ratio of fish to snails_____

AREA of CIRCLE

How do we solve the area of a circle……A=$\pi\ r^2$

If the radius of a circle is 3cm, what is the area_____

If the diameter of a circle is 10ft what is the area_____

The ratio of humpback whales to orcas was 2 to 1. If there were 800 humpback whales, how many orcas were there?_____

What is the total cost of my purchase if the subtotal was $7.45 with a 3% sales tax?_____

Write the decimal number one hundred five and five hundredths_____

Write the decimal number five hundred twenty-one and four hundred thirty-two thousandths_____

Solve for n

3n + 1= 16 n=_____ 2n – 1=9 n=_____

4n – 1= 35 n=_____ 7n +4=25 n =_____

Remember is means = and "of" means multiply

What number is one fourth of 360_____

What number is half of 90_____

46 is half of _____

If the hexagon side measures 3 cm. what is the perimeter_____

If the pentagon side measures 2 ft. what is the perimeter_____

If the octagon side measures 4 mm, what is the perimeter_____

What is the GCF of 30 and 45_____

0.3n=$6.39 n=_____

What is the area of a triangle, if the base is 4in and height is 3 inch_____

+7 + (-8) =_____ -7 + (+8)=_____

If the interior angles of the triangle are 40 degrees and 50 degrees, what is the third angle_____

3^2-3^2÷ 3- 3 x 3_____

What is 2/3 of 24_____

What is 50 % of $48_____

$10.00-8.59=_____

Reduce this down 1600/400=_____

When a division problem has a remainder, there are several ways to write the answer.

With a remainder 15÷4= 3 R 3 or

As a mixed number 15÷4= 3 ¾ or

As a decimal number 15÷4=3.75

How a division answer should be written depends upon the question to be answered. In real-world applications we sometimes need to round the answer up, and sometimes we need to round down. The quotient 15 ÷4 rounds up to 4 and rounds down to 3.

Ex: one hundred students are to be assigned to 3 classrooms. How many students should be in each class so that the numbers are balanced as possible?

Dividing 100 by 3 gives us 33 R1. Assigning 33 students per class gives us 99 students. We add the remaining student to one of the classes giving that class 34 students. We write the answer 33, 33, 34.

Ex. Movie tickets cost $8. John has $30. How many tickets can he buy?

We divide 30 dollars by 8 dollars per ticket and get 3 ¾ tickets. John can't buy ¾ of a ticket, so we round down to the nearest whole number. John can buy 3 tickets.

Ex. 15 children need a ride to the fair. Each car can transport 4 children. How many cars are needed to transport 15 children.

We divide 15 children by 4 children per car. The quotient is 3 ¾ cars. Three cars are not enough. Four cars will be needed. One of the cars will be ¾ full. We round 3 ¾ cars up to 4 cars.

Practice:

Ninety students were assigned to four classrooms. How many students were in each classroom as equally as possible?

Twenty-eight children need a ride to the fair. Each van can carry six children. How many vans are needed?

Eighty students will be assigned to three classrooms. How many students should be in each class so that they are as balanced as possible?

Four friends went out to lunch. Their bill was $45. If the friends divide the bill equally, how much will each friend pay?

Use a centimeter ruler and an inch ruler to answer the question. Twelve inches is closest to how many centimeters? Round the answer to the nearest centimeter_____

If two angles of a triangle measure 70 degrees and 80 degrees, then what is the measure of the third angle?_____

Solve 3m +1 = 100 m=_____

The price of an item is $.89. The sales tax is 7 %. What is the total for the item with tax?_____

Solve $\frac{10}{16}=\frac{25}{y}$ y=_____

¾ of 24 _____

A cube has a volume of 27 in. What is the length of the sides of the cube?_____

$4.98 + $2.49=_____

0.5 ÷ 10=_____

500 x 3=_____

$\sqrt{36}$=_____-$\sqrt{25}$=_____-$\sqrt{49}$=_____-

Multiplying and dividing integers

We know that when we multiply two positive numbers the product is positive.

(+3) (+4)= +12

Notice that when we write the 3 and 4 there are no + or – sign between the sets of parentheses. Having two parentheses next to each other means to multiply like the x and the dot.

When we multiple a positive number and a negative number, the product is negative.

3 x (-4) means (-4) + (-4) + (-4)

We write the multiplication this way

(+3) (-4)= -12 said, positive three times negative four equals negative 12.

Positive x negative=negative

when we multiply two negative numbers, the product is positive. Consider this sequence of equations:

1. Three times 4 is 12 3 x 4=12
2. Three times the opposite of 4 is the opposite of 12 3 x -4= -12
3. The opposite of 3 times the opposite of 4 is the opposite of the opposite of 12 -3 x -4= +12

Negative x negative= positive

Two rules to memorize:

1. **If the two numbers in a multiplication or division problem have the SAME sign the answer is positive.**
2. **If the two numbers in a multiplication or division problem have DIFFERENT signs the answer is negative.**

Practice

(+8)(+4)=_____ (+8)(-4)=_____

(-8)(-4)=_____(-8)(+4)=_____

(+8) ÷(+4)=_____(+8) ÷(-4)=_____

(-8)÷(-4)=_____(-8)÷(+4)=_____

Two hundred students are traveling by bus on a field trip. The maximum number of students allowed on each bus is 84. How many buses are needed for the trip?

(-2) (-6)=_____(-4)(-8)=_____

(4)(+5)=_____(+7)(-4)=_____

+10 ÷ -2=_____ -4 ÷ -2=_____

-12 ÷ -2=_____+144 ÷ -12=_____

Find the following of a rectangular prism using the formula V=lwh when the length is 8 cm, width is 5 cm, and the height is 2 cm.

How many millimeters is 1.2 meters? (1 m=1000 mm)

Which of the following is not a composite number?

24 35 36 37

3^2 + 2 x 5^2 - 50 ÷ $\sqrt{25}$=_____

Write 6.2 x 10^2 in standard notation ---remember to multiply by a power of ten, simply move the decimal point the number of places shown by the exponent.

Write 1.2 x 10^4_____

Changing percent to fractions with a denominator of 100.

50%= $\frac{50}{100}$= ½

$33\frac{1}{3}\%$ = $33\frac{1}{3}$
---
100 the line means to divide

$\frac{100}{3}$ x $\frac{1}{100}$ = $\frac{1}{3}$

Practice

Convert $3\frac{1}{3}\%$ to a fraction. Remove the percent sign and write the denominator 100, the perform the division._____

Convert $66\frac{2}{3}\%$ to a fraction. _____

Convert $12\frac{1}{2}\%$ to a fraction. _____

Convert $14\frac{2}{7}\%$ to a fraction. _____

Write the standard number for (5×10^4) + (6×10^2)

If the radius of a circle is seventy-five hundredths of a meter what is the diameter?_____

Finding the whole number when it is missing

Ex two fifths of the students in the class are boys. If there are ten boys in the class, how many students are in the class?

Line up the same numerators and the same denominators the number two is for the boys,the remaining three would be the number of girls

$$\frac{2 \text{ boys}}{5 \text{ total}} = \frac{10 \text{ number of boys}}{\text{total number of children}}$$

Do the Z method for solving =2 goes into 10, 5 times, 5 x 5 =25 that is the total number of children. 25-10 = 15 number of girls

You try: just make sure to line up your same numerators and denominators

Three eighths of the townspeople voted. If 120 of the townspeople voted, how many people live in the town?

Six is 2/3 of what number? (remember is means = and of means x)

Eight is 1/5 of what number?

Eight is 2/5 of what number?

Three fifths of the students in the class were girls. If there were 18 girls in the class, how many students were in the class altogether?

If 130 children are separated as equally as possible into four groups, how many will be in each group? Write four numbers one for each of the four groups.

Lets solved. Remember of means multiply and is means =

Thirty percent of what number is 120?

30% x n= 120 Lets change 30% to a decimal== 0.3 n = 120

To get the “n” by itself, divide the 0.3 on the right and then the left.

It will cancel itself out on the right and then you have 120÷03=400

N=400 do a few on the board

Solve:

Sixteen is 25% of what number?

Twenty percent of what number is 120?

Fifty percent of what number is 30?

Twenty is 10% of what number?

Fifteen is 15% of what number?

Twelve is 100% of what number?

Twenty-five percent of what number is 12?

Divide 555 by 12 and write the quotient

1. With a remainder
2. As a mixed number

Eight is 2/3 of what number?

Volume of a cylinder

V=$\pi\ r^2$h

As with all your area finding problems, all you do is plug in the numbers. If you know the radius and the height of your cylinder then plug them in. Write on your paper the formula first and then fill in the spots right below it.
Find area of cylinder with 10 cm height and 20 cm diameter
We know that radius is half the diameter

V=$\pi\ r^2$h
V= (3.14) (10^2) (10)
V= (3.14) (100) (10)
V- 3140 cm^3

You solve:
A large can of soup has a diameter total of 8 cm and a height of 12 cm. What is the volume? Round to the nearest hundred cubic centimeters

About how long is your little finger?
0.5 mm 5 mm 50mm 500mm

If 3 parts is 24 grams, how much is 8 parts?

-6 - -4 _____ -10 + -15_____ (-10)(-10) -_____

At $1.12 per pound, what is the price per ounce?_____ (1 pound= 16 ounces)

The children formed a circle. The diameter of the circle was 10 m. What was the circumference of the circle?? (use 3.14 for π)

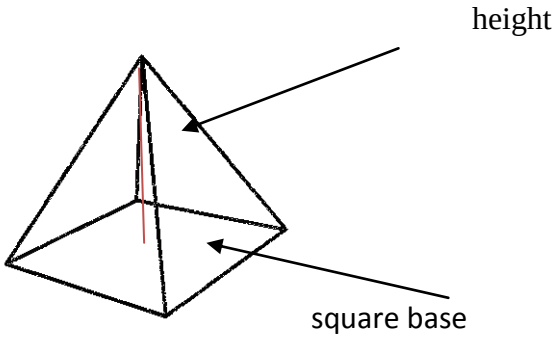
If the area of a square is 35 cm^2 what is the perimeter?_____

+3 + -5 - -7 - +9 + +11 + -7 solve_____

Lots more formulas to memorize. This will be in future classes, but to get the base down is important. Remember it is always just filling in the numbers to the formula

To find the volume of a pyramid the formula is
$V = \frac{1}{3}(b \times h)$

B is the area of the base and h is the height

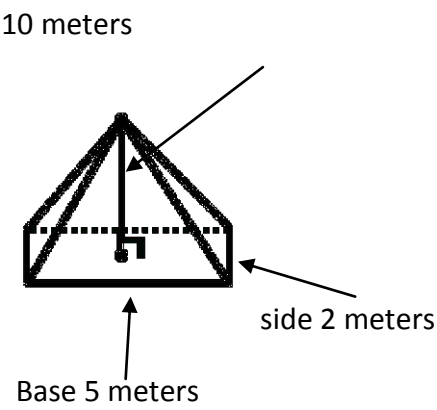


A square pyramid has a height of 9 meters. If a side of the base measure 4 meters, what is the volume?

Since the base is a square , the area of the base = 4 x 4=16m^2

Volume of the pyramid = (b x h) ÷ 3= (16 x 9)÷ 3 = 48

If you have a rectangular pyramid, the base size is different. They will give you two different numbers.



Fill in the numbers

V=(b x h) ÷ 3

Since the base is a rectangle, area of the base = 3 x 5= 15 m^2

Volume of pyramid (15 x 10) ÷3= 50 m^3

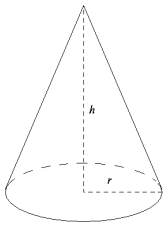
Find the volume of a rectangular pyramid

V=(b x h) ÷ 3

Height is 8cm , the base is 4 cm, and the side is 2 cm _____

Volume of a cone

V of a cone= $\frac{1}{3}$ area of base x height



b is the area of the base of the cone. Since the base is a circle, area of the base = pi × r^2

Thus, the formula is V_{cone} = 1/3 ×(pi × $r^{2)}$ × (h)

Use pi = 3.14

Example #1: Calculate the volume if r = 2 cm and h = 3 cm

V_{cone} = 1/3 × 3.14 × 2^2 × 3
V_{cone} = 1/3 × 3.14 × 4 × 3
V_{cone} = 1/3 × 3.14 × 12
V_{cone} = 1/3 × 37.68
V_{cone} = 1/3 × 37.68/1
V_{cone} = (1 × 37.68)/(3 × 1)
V_{cone} = 37.68/3
V_{cone} = 12.56 cm^3

Example #2: Calculate the volume if r = 4 cm and h = 2 cm

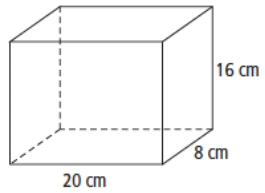
V_{cone} = 1/3 × 3.14 × 4^2 × 2
V_{cone} = 1/3 × 3.14 × 16 × 2
V_{cone} = 1/3 × 3.14 × 32
V_{cone} = 1/3 × 100.48
V_{cone} = 1/3 × 100.48/1
V_{cone} = (1 × 100.48)/(3 × 1)
V_{cone} = 100.48/3
V_{cone} = 33.49 cm^3

Find the volume of a cylinder Formula is V= πr^2h

The diameter is 10 cm and the height is 5 cm _____

Find the volume of a cone with a height of 10 in and a base of 1.2 in

To find the surface area of a rectangular prism, you find the area of each side and add them up.



Area of two faces (top and bottom)= (20x 8) + (20x 8) 160

Area of two faces (sides)= (16 x 8) + (16 x 8) 128

Area of two faces (front and back) (20 x 16) + (20 x 16) 320

Thus the total surface area of the prism is 1216 cm^2

From this we can develop a formula for the surface area of a prism

SA= 2lw + 2 lh + 2wh

You try:

Find the surface area of rectangular prism with side measuring 8 in _____

Find the surface area of rectangular prism with sides 11, 2,2 cm. It may help to draw it out

_____

Find the surface area of cube prism with sides 4 cm _____

This is a coordinate plane. Let's learn where the x and y axis is. I am going to have you practice graphing some numbers. Mom will help you will do more next year.

Graph point (1,5)

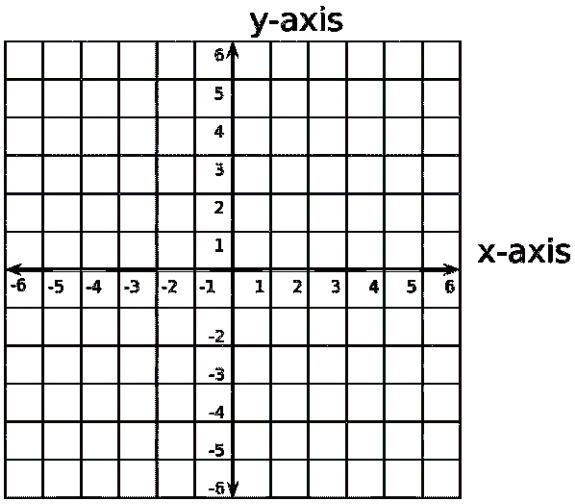
Point (2, 3)

Point (4,0)

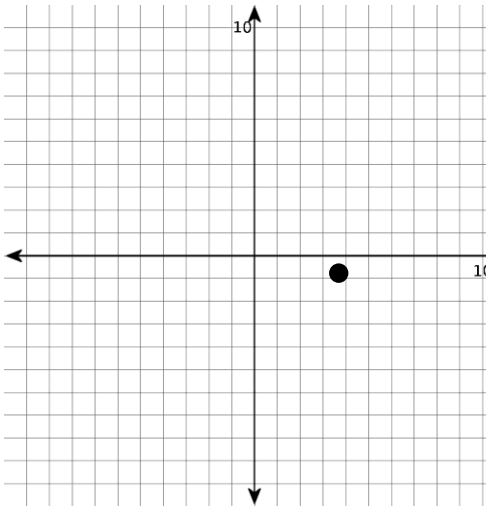
Point (-3,0)

Point (-3, 1)

Point (-3,2)

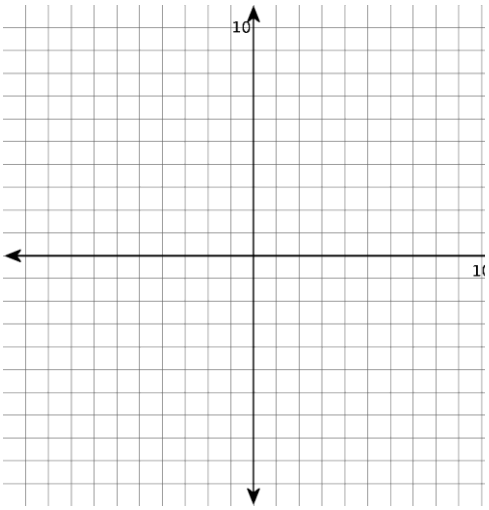


1 a.



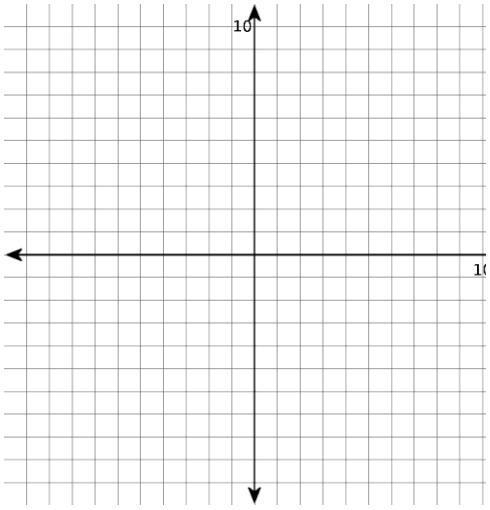
Write the coordinates of the points you see in the image.

1 b.



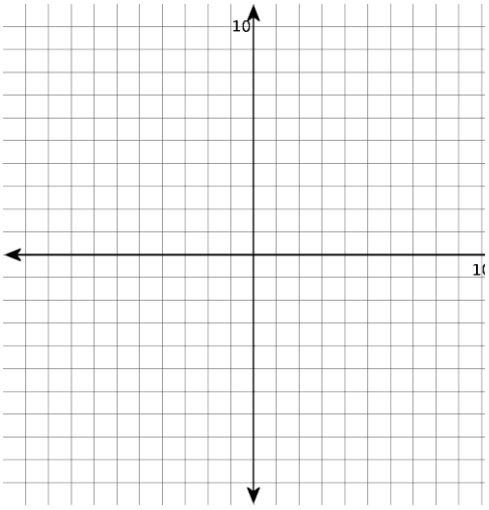
Plot the following points: (-8, -10), (0, 1), (-3, -10), and (-7, -2).

2 a.



Plot the points (-6, 7), (-3, 6), (8, 9), (5, -7), and (-5, -6), and join them to get a shape. What shape is it?

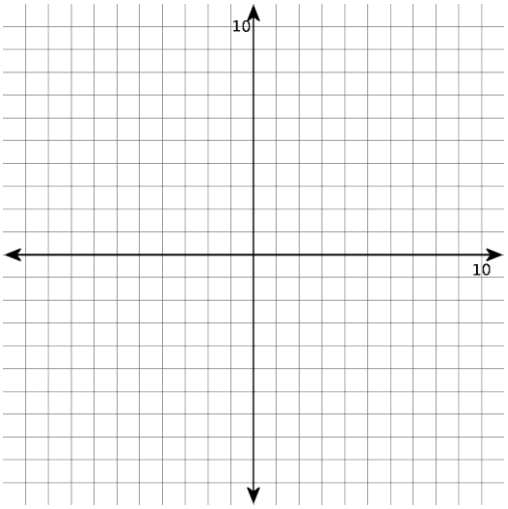
2 b.



Plot the following points: (2, 1), (1, -4), (8, 2), and (-6, 3).

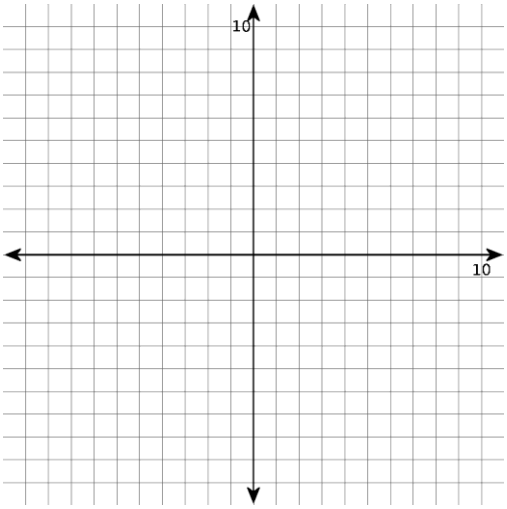
Coordinate grid

1 a.



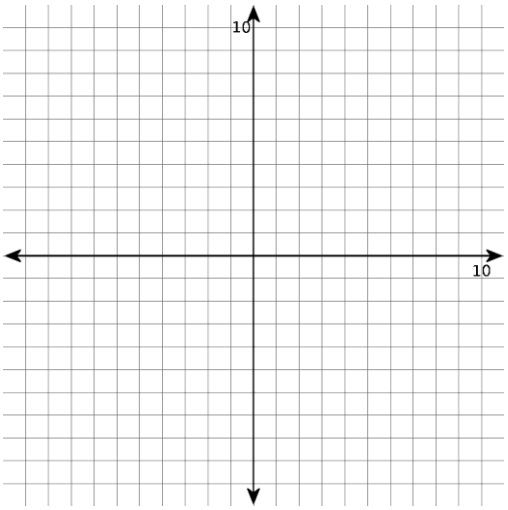
Draw a quadrilateral with vertices (-9, 4), (3, 0), (8, -3), and (-5, -9).

1 b.



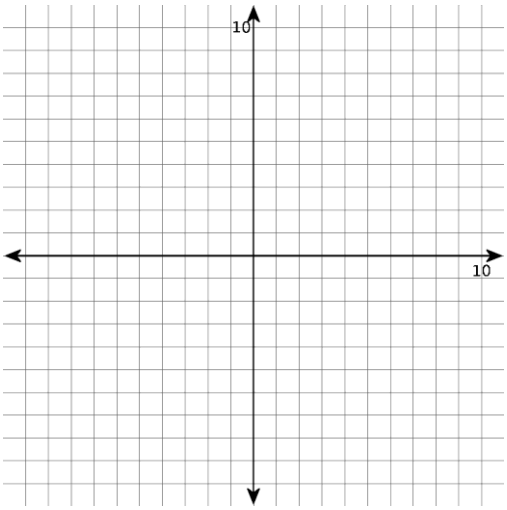
Draw a trapezoid with vertices (-5, 7), (4, 2), (4, -1), and (-5, -2).

2 a.



Draw a parallelogram with vertices (0, 2), (7, 2), (1, -3), and (-6, -3).

2 b.



Draw a parallelogram with vertices (2, 3), (5, 3), (1, -4), and (-2, -4).

Write an expression.---mom I saved the answers

1 a. 46 subtracted from *s*	**1 b.** difference of 9 and *m*
2 a. product of 5 and *a*	**2 b.** *s* squared
3 a. *x* and 10 more	**3 b.** *c* cubed
4 a. 49 divided by *m*	**4 b.** 3 subtracted from *s*
5 a. 23 divided by *k*	**5 b.** 7 multiplied by *n*
6 a. *z* to the 7th power	**6 b.** 90 fewer than *a*

Write an expression. Mom has answers

1 a. 3 divided by the sum of *a* and 2
2 a. the quotient of *p* squared and 6
3 a. 3 times the sum 8 plus *a*
4 a. the sum of *n* and 3, divided by 6
5 a. 10 divided by the sum of 3 and *y*
6 a. the difference of 5*t* and 6
7 a. 7*p* less than 9
8 a. the quantity 27*w*, cubed

Factoring / Distributive Property Worksheet

Use the distributive property to simplify the expressions. Mom has answers

1 a. $5(3 + 8m)$	**1 b.** $2(3d + 5)$
2 a. $4(4 + 3a)$	**2 b.** $8(7u + 3)$
3 a. $7(1 + 4x)$	**3 b.** $5(5 + 8m)$
4 a. $5(1 + 4q)$	**4 b.** $4(3p + y)$
5 a. $6(7b + 10)$	**5 b.** $4(2m + d)$
6 a. $7(5s + 11)$	**6 b.** $9(11 + 3m)$
7 a. $9(4r + 11)$	**7 b.** $7(11 + 8k)$

Solve the linear Equations

11 + 10 = 1 + t t=_____

a-5 = 11 a=_____

11 = t-5 t=_____

7= $\frac{w}{8}$ w=_____

12y – 8 y = 11 y= _____

2 = $\frac{z}{2}$ z= _____

C + 9= 10 c=_____

4 + c = 5 +8 c=_____

4 + t= 11 t=_____

C + 9 = 10 c=_____

4 + c = 5 +8 c=_____

5= 11z + 7z z=_____

Six hundred forty-nine thousand, two hundred twenty-two plus thirty nine thousand, one hundred fourteen equals:_____

Seven hundred seventeen thousand, two hundred fifty-six subtracted from nine hundred eighty-four is _____

4322 x 121=_____

764 x 21.87=_____

0.931x 0.1=_____

8.4762 x 10,000=_____

0.00875 x 100,000=_____

525250 ÷ 5=_____

121435 ÷5=_____

36321÷3=_____

26806÷22_____

76.543÷0.23=_____

87.5510÷0.055=_____

654.97654÷10,000=_____

0.0007654÷100,000=_____

Figured you should brush your teeth two times a day. We started when you were 1 year old. If you live to be 103 years old, how many times will you have brushed your teeth, assuming you only did 2 times per day?_____

Figure you sleep 7 hours per night. How long will you sleep for in one months time?_____

If you play video games for 4.5 hours everyday. How much time do you spend in one year if you played for that many hours everyday except for Sundays?_____

If you spend 1 hour reading everyday for school and you are in school for 180 days, how much time will you spend in minutes reading?_____

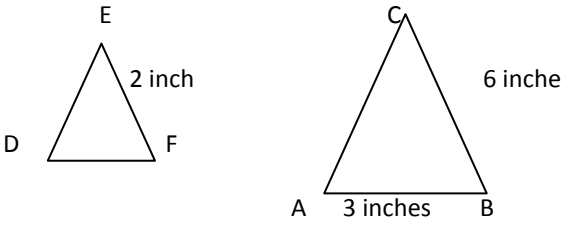
1. In the equation below, what is the value of x

20= x + (2x8) - 6

2. Sam has 30 pens. His friend Bob has k less pencils. Which expression shows the number of pencils Sam has?

30-2k 20-k k-30 30+ k

Triangle ABC is similar to triangle DEF



What is the length of DF?

2inches 1 inch 3 inches 1.5 inches

What is the value of the expression below?

5(3)

15 8 25 125

Use the following list to find the average or mean, the median, the mode, and the range

10, 15, 5, 8, 6, 6, 2

Average=_____

Median=_____

Mode=_____

Range=_____

-5 - 8 =_____

5-8=_____

-8 – 5=_____

-8 - -5=_____

Find the perimeter and area of the rectangle below:

$4\frac{5}{3}$ cm

Perimeter:_____cm

Area=_____cm^2

Add 3/5 and 1/7=_____

For the number 76.3456, the value of the 5 is

5 tens 5 tenths 5 hundredths 5 thousandths 5 thousands

If 9450 ÷ x = 21, what is x_____

Put the following numbers in order from least to greatest

- ¼ , 0.90, - 2/4, 0.20, ¾, 1.50, -0.50 change to decimals first

_____

You want to save money to buy new skates. You start with 50 dollars and you save $4 each day, which expression show the amount of money you have after x days?

50-4x 4x-50 4x +50 50+4 x 10

How much money do you have after 20 days?

120 dollars 130 dollars 110 dollars 200 dollars

Write down all composite numbers bigger than 10 and smaller than 20 (hint there are 5)

_____

Write down all prime numbers bigger than 10 and smaller than 20 (hint there are 4)

_____

How many lines of symmetry does a square have?_____

The diameter of a circle is 8 inches

What is the perimeter_____C=πd

What is the area_____ formula $\pi\ r^2$

John and Mike have 40 dollars together. If John has 4 times more money then Mike, how muc does he have. (hint trial and error)

John has _____

Mike has_____

A machine produces 5000 items in 6 minutes. Write a proportion and solve to see how many it takes to produce 15,000 items (think z thing)

After eating at the restaurant, your food bill comes to $120. They require a 15 % tip. How much is your bill?_____

On a map, 1 inch represents 30 miles. How many inches will show a distance of 120 miles?_____

Draw me two hearts that are congruent

Draw me two triangles that are similar

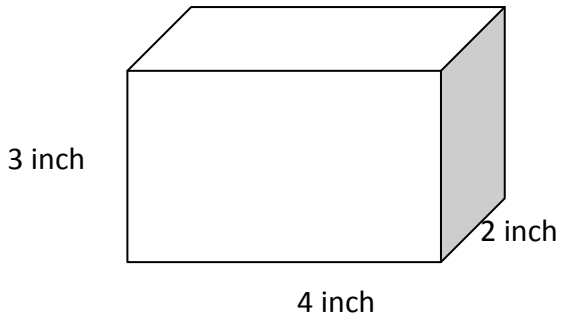
Evaluate the expression below:

(8+2) [$(7 - 3) \times 5$]_____

How many inches are in 3 and ½ feet_____

How many meters are in 500 centimeters_____

What is the volume and surface area of the following rectangular prism?



Volume:_____

Surface area _____

The shape of a swimming pool is more like a

Rectangular prism circle pyramid shere

You go shopping and see a sign that says “buy 1 shirt and get 20% off of the second shirt” The shirt cost $30 and you buy 2 of them. What is your total?_____

What is the perimeter of a hexagon if the side measures 4 cm?_____

What is the perimeter of an octagon if the sides measure 5 in?_____

Andy's shoe is 10.4 inches long. Mike's is 1.2 times as long. How long is Mike's shoe?_____

Jadyn can jump 24.8 inches. Jill can jump 1.05 times as high. How high can Jill jump?_____

The paper basket holds 288 sheets of paper. It is 0.25 full. How many sheets of paper is in it?_____

Evan's dog weights 98.5 pounds. Jared's dog weighs 1.25 times as much. How much does Jared's dog weigh?_____

The box holds 48 pencils. It was 0.75 full. How many more pencils would fit in the box?_____

Fill in a chart with the days of the week across and children's names down the side.

One week (Sunday through Saturday) there is a birthday party every day. No two children are invited to the same party. Find out the day that each child attends a party.

1. Lisa and Pat don't go to a party on a Friday or Saturday.
2. Pat and Alice don't go on a Tuesday, but Sandy does.
3. Jennifer goes to a party on Wednesday.
4. Jim goes to a party the day after Jennifer.
5. Lisa goes to a party the day before Pat.
6. Paul goes to a party on a Saturday.
