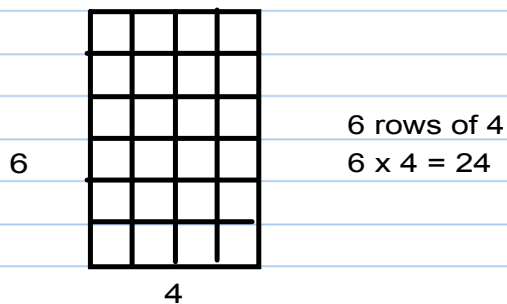
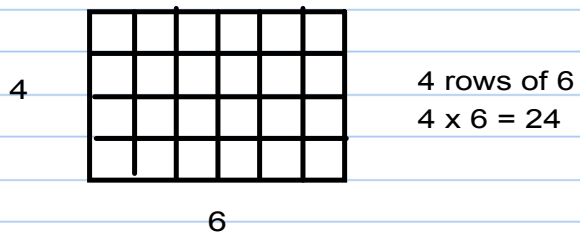


Arrays

8/8/16

Array - a rectangular arrangement of equal rows



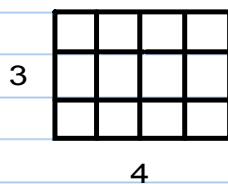
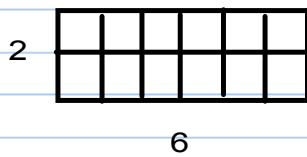
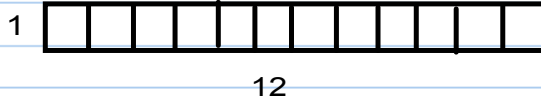
Dimension - the number of rows and columns in an array

Multiplication - the operation of repeated addition of the same number

Factors

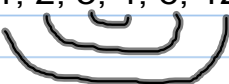
8/9/16

Factor - each dimension on an array



Factors of 12

1, 2, 3, 4, 6, 12

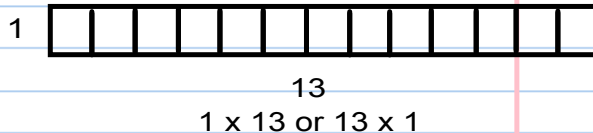


Prime, Composite, and Square Numbers

8/10/16

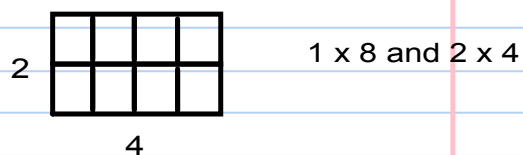
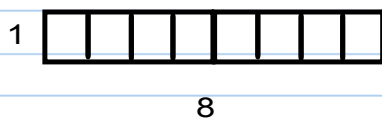
Prime Number - a number with exactly 2 factors: one and itself

Example: 13 is a prime number
factors: 1, 13



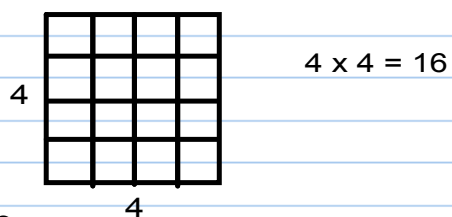
Composite Number - a number with more than 2 factors

Example: 8 is a composite number
factors: 1, 2, 4, 8

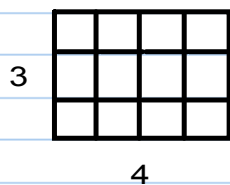


Square Number - a number that can be represented by a square array

Example: 16 is a square number



Product - the number of squares in an array; the answer to a multiplication problem



$$3 \times 4 = 12$$

factor x factor = product

Factor Pair - the dimensions of an array written as an expression

$$3 \times 4$$

Multiplicative Comparison

8/12/16

In a zoo there is an eastern diamondback rattlesnake that is 6 feet long and a reticulated python that is 4 times as long as the rattlesnake. How many feet long is the python?

diamondback rattlesnake

1

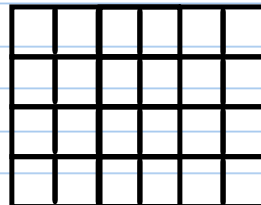


$$1 \times 6 = 6 \text{ feet}$$

6

reticulated python

4



$$4 \times 6 = 24 \text{ feet}$$

6

The python is 24 feet long.

C

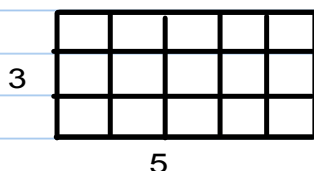
Array Story

8/15/2016

Write a story that represents 3×5

John has \$5 in his wallet. George has 3 times as much money as John. How much money does George have?

C



3 rows of \$5 = \$15

George has \$15

page 6

C

Which statement BEST represents the number sentence below?

$$28 = 4 \times 7$$

- A. The number 4 is 7 times as many as 28
- B. The number 28 is 4 times less than 7
- ☒ C. The number 28 is 4 times as many as 7
- D. The number 7 is 4 times as many as 28

factor - a whole number that divides another number evenly, with nothing left over

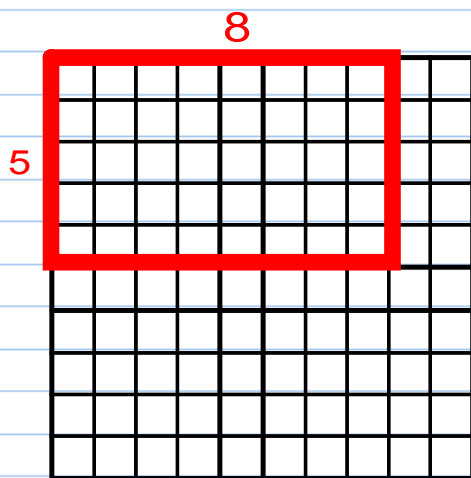
multiple - the number that you say when you skip count

Another Array Story

8/17/2016

Write a story that represents 5×8 .

Nicole has 8 followers on Facebook. TerriAnne has 5 times as many followers as Nicole. How many followers does TerriAnne have on Facebook?



$$5 \times 8 = 40 \text{ followers}$$

Prime or Composite

8/19/2016

Tell whether the following numbers are prime or composite. How do you know?

11 - prime because it has only 2 factors: 1×11

18 - composite because it has more than two factors:
 1×18 and 2×9

List all the prime numbers less than 30.

2 3 5 7 11 13 17 19 23 29

Circle each of the composite numbers.

13 24 15 12 32 39 47 17 51

Draw a box around the numbers that have only prime digits.

6537 2795 3247 5732 4963



Factors of Multiples of 100

8/22/16

Factors of 100

1, 2, 4, 5, 8, 10, 20, 25, 50, 100

Factors of 200

1, 2, 4, 5, 8, 10, 20, 25, 50, 100, 200



If $4 \times 25 = 100$, then 8 $\times 25 = 200$

If $5 \times 20 = 100$, then $5 \times$ 40 $= 200$

If $10 \times 10 = 100$, then 20 $\times 10 = 200$

If $2 \times 50 = 100$, then 4 $\times 50 = 200$

page 10



C

Factors of Related Numbers

8/23/16

If 25 is a factor of 100, then 25 is also a factor of 300
because 300 is a multiple of 100. (100×3)

If 4 is a factor of 8, then 4 is also a factor of 72
because 72 is a multiple of 8. (8×9)

If 4 is a factor of 16, then 4 is also a factor of 48
because 48 is a multiple of 16. (16×3)

C

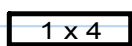
C

How Many Arrays?

8/24/16

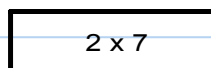
How many arrays can be made with the following numbers?

4

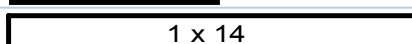


2×2

14

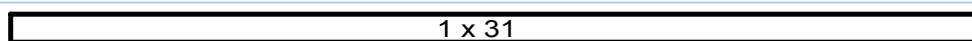


2×7



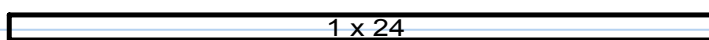
1×14

31

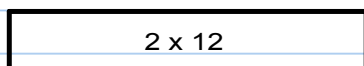


1×31

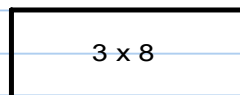
24



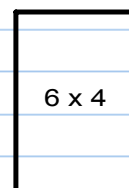
1×24



2×12

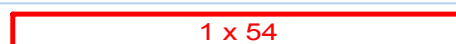


3×8

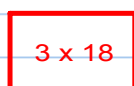


6×4

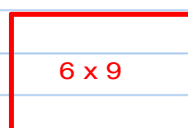
54



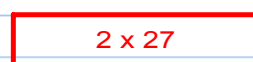
1×54



3×18



6×9



2×27

Data and Line Plots

8/26/16

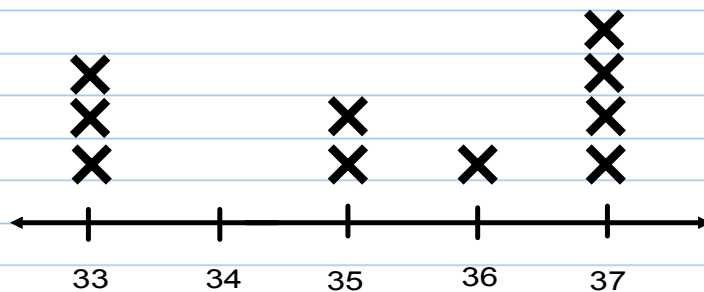
data - collected statistics or information on a topic

line plot - a useful way to organize data on a number line

bar graph - a useful way to organize data using scales and bars

Data: 35, 33, 36, 37, 35, 33, 37, 37, 33, 37

Line Plot:

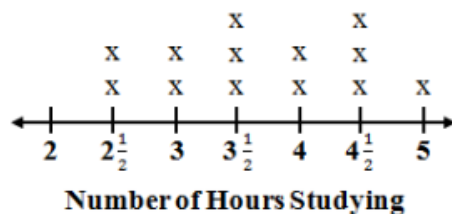


page 13

Using Data

8/31/16

Thirteen high school students were asked how many hours they study each week. The results are recorded below.



What's the difference between the longest time studying and the shortest time?

counting up from $2\frac{1}{2}$ to 5 equals 5 halves. Five halves equals $2\frac{1}{2}$ hours.

If all the $3\frac{1}{2}$ hour times were combined, what would the total time studying be?

counting three 3s plus three halves equals $10\frac{1}{2}$ hours.

page 14

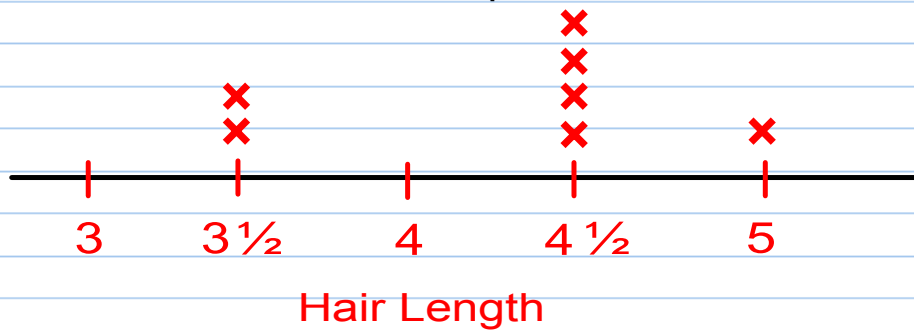
More Using Data

9/2/16

Seven girls measured the lengths of their hair.
The results are listed below.

Mary $4\frac{1}{2}$ in., Jane 5 in., Martha $3\frac{1}{2}$ in., Barbara $4\frac{1}{2}$ in.,
Susan $4\frac{1}{2}$ in., Sally $3\frac{1}{2}$ in., and Faith $4\frac{1}{2}$ in.

Use this data to make a line plot.



Breaking Numbers Apart

9/14/16

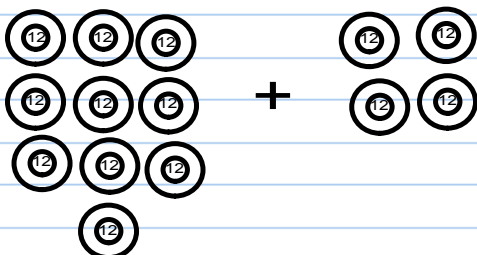
Mr. Jones bought 14 dozen bagels for a birthday party. How many bagels is that all together?

$$\begin{aligned}
 14 \times 12 &= (10 \times 12) + (4 \times 12) \\
 &= 120 + 48 \\
 &= \boxed{168 \text{ bagels}}
 \end{aligned}$$

14	
10 x 12	4 x 12

12

$$120 + 48 = \boxed{168 \text{ bagels}}$$



$$\begin{array}{rcl}
 10 \times 12 & + & 4 \times 12 \\
 120 & + & 48 & = & \boxed{168 \text{ bagels}}
 \end{array}$$

Making Big Arrays

9/15/16

9

4	4×9 9×4
---	------------------------------

$4 \times 9 = 36$

9

4	4×4	4×5 5×4
---	--------------	------------------------------

$(4 \times 4) + (4 \times 5) = 36$
 $16 + 20 = 36$

9

4	2×9
	2×9

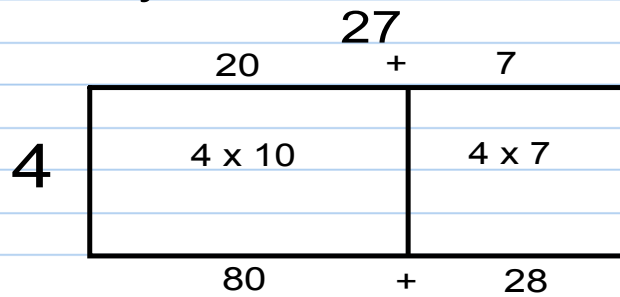
$(2 \times 9) + (2 \times 9) = 36$
 $18 + 18 = 36$

9

4	4×6 6×4	4×3 3×4
---	------------------------------	------------------------------

$(4 \times 6) + (4 \times 3) = 36$
 $24 + 12 = 36$

How many wheels are on 27 cars?



$$\begin{aligned} 4 \times 27 &= (4 \times 20) + (4 \times 7) \\ &= 80 + 28 \\ &= 108 \text{ wheels} \end{aligned}$$

Luke has 16 marbles. Jill has 7 times as many marbles. How many marbles does Jill have?



C

Division Stories

9/22/16

There are gold coins found at the site of a shipwreck. If a scuba diver could carry 18 of these coins to the surface in one trip, how many trips would it take to carry 108 coins?

Use a multiplication tower:

180

162

144

126

The 6th multiple is 108, so it would take **6 trips** to carry 108 coins.

108

6th multiple

90

72

54

If the number of total coins was

36

18

C

page 19

Measurements

Length Equivalents (U.S. Standard System)

1 foot = 12 inches

1 yard = 3 feet

1 yard = 36 inches

Length Equivalents (Metric System)

1 centimeter = 10 millimeters

1 meter = 100 centimeters

1 meter = 1,000 millimeters

C

Units of Linear Measurement

10/19

U.S. Standard

inch - distance between the first and second joint of your pointer finger

foot - 12 inches, a little longer than your foot

yard - 3 feet, about the width of a door

mile - 5,280 feet, 1,760 yards, about the distance between Lakewood and Publix

C

Metric

millimeter - the thickness of a dime

centimeter - 10 millimeters, about the width of your pinky finger

meter - 1,000 millimeters, 100 centimeters, about the width of a door

kilometer - 1,000 meters, about the distance between Lakewood and Pierce Road

page 20

C

Weight and Capacity

Weight

1 pound (lb) = 16 ounces (oz)

1 ton = 2,000 pounds

1,000 milligrams (mg) = 1 gram (g)

1,000 grams (g) = 1 kilogram (kg)

Capacity

1 gallon (gal) = 4 quarts (qt)

1 quart (qt) = 2 pints (pt)

1 pint (pt) = 2 cups (c)

1 cup (c) = 8 ounces (oz) (not to be confused with weight ounces)

1 tablespoon (tbs) = 3 teaspoons (tsp)

1,000 milliliters (mL) = 1 liter (L)

1 liter (L) = 1,000 milliliters (mL)

Area Model Multiplication

1. Break your expression apart by its place value.
2. Draw out the box to solve the equation.
3. Multiply.
4. Add

Example) Find the product of 18×7 .

Area Model- 2 digit by 2 digit

-Follow the same steps!

-Ask yourself "What number is beside this box? What number is above this box?"

Example: Find the product of 17×13 .

Telling Time



$\frac{1}{4}$ of an hour = 15 minutes

$\frac{1}{2}$ of an hour = 30 minutes

$\frac{3}{4}$ of an hour = 45 minutes

How many minutes is $2\frac{1}{2}$ hours?

$60\text{ min.} + 60\text{ min.} + 30\text{ min.} = 150\text{ min.}$

How many minutes is $3\frac{1}{4}$ hours?

$60\text{ min.} + 60\text{ min.} + 60\text{ min.} + 15\text{ min.} = 195\text{ min.}$

How many minutes is $1\frac{3}{4}$ hours?

$60\text{ min.} + 45\text{ min.} = 105\text{ min.}$

Example) Miss Edwards left for her beach trip at 9:30 A.M. It took her $2\frac{1}{2}$ hours to get there. What time did she get to the beach?

12:00 P.M.

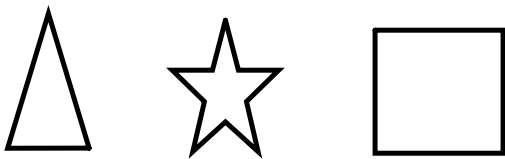
Introduction to Polygons

- Polygons have straight line segments for sides which only cross (intersect) at the point (vertice).

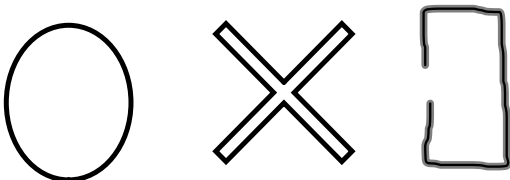
Polygons:

1. Never have lines that cross.
2. Never have gaps in their lines.
3. Never have curved edges.

Polygons



Not Polygons



-Polygons are named according to the number of sides they have.

Ex) Triangle (Tri means 3.)

Other Geometric Symbols

Point



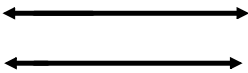
Line Segment



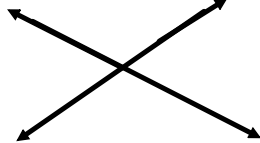
Line



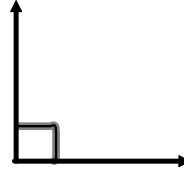
Parallel Lines



Intersecting Lines



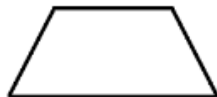
Perpendicular Lines



parallelogram- a quadrilateral with opposite sides parallel

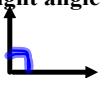


trapezoid- quadrilateral with one set of parallel sides



Angles

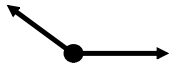
-Right angles = 90 degrees



-Acute angles = less than 90 degrees



-Obtuse angles = more than 90 degree but less than 180 degrees.



-Straight angles = 180 degrees.



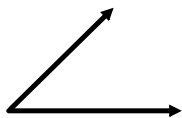
Example) What could the measurement for this angle be?



- a. 170
- b. 20
- c. 110
- d. 50

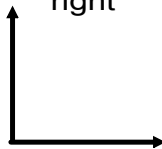
Angles Cont.

acute



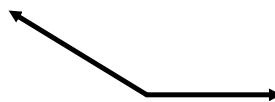
less than 90°

right



90°

obtuse

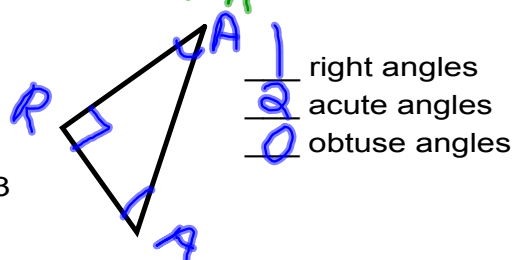
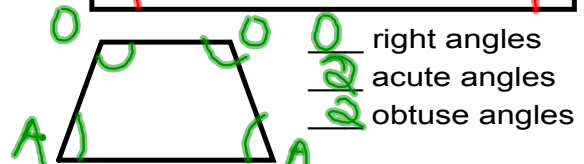
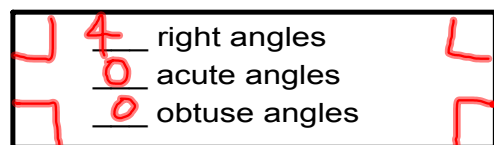
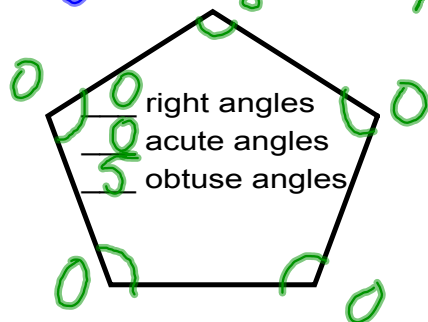
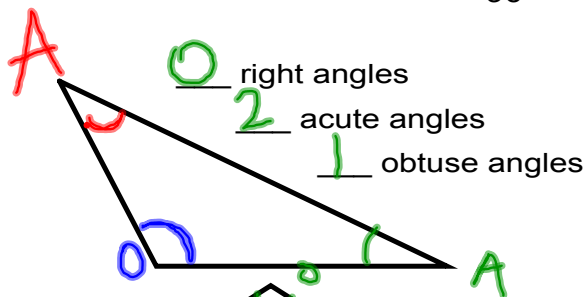


greater than 90°

straight

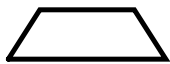


180°



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trapezoid quadrilateral with at least one pair of parallel sides



parallelogram quadrilateral with two pairs of parallel sides



rhombus quadrilateral with two pairs of parallel sides
all four sides are the same length



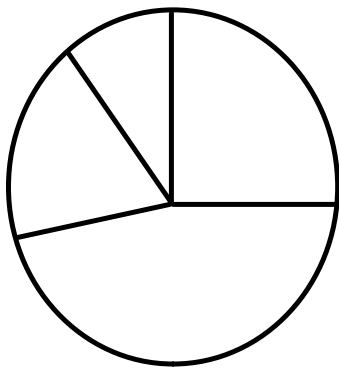
rectangle quadrilateral with two pairs of parallel sides
has 4 right angles



square quadrilateral with two pairs of parallel sides
has 4 right angles
all four sides are the same length



Measuring angles with a protractor



What is the measure of the smallest angle?

How many degrees are in $\frac{1}{4}$ of a circle?

How many degrees are in $\frac{1}{2}$ or $\frac{2}{4}$ of a circle?

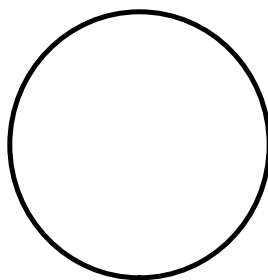
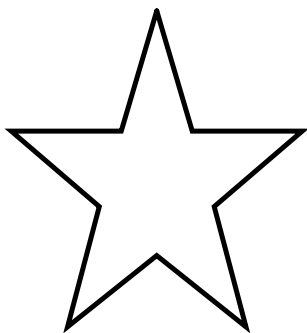
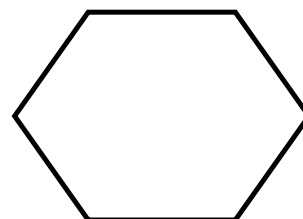
How many degrees are in $\frac{3}{4}$ of a circle?

How many degrees are in $\frac{4}{4}$ or 1 whole circle?

Symmetry

An object has symmetry (is symmetrical) when one half is the mirror image of the other half.

Directions: Draw lines of symmetry through each of the shapes.



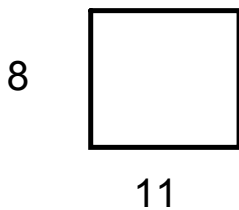
Area and Perimeter

Perimeter

Definition: The distance around the outside

How to find it:
Add up all the sides.

Example:



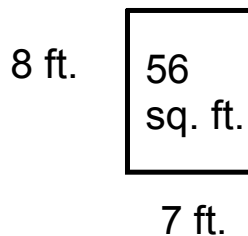
Real World Use:
Building a House

Area

Definition: The space inside of a shape

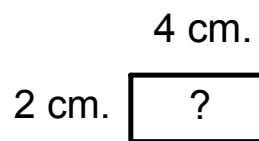
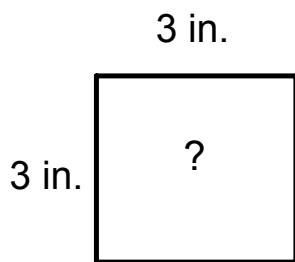
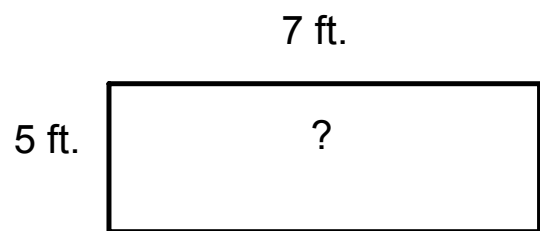
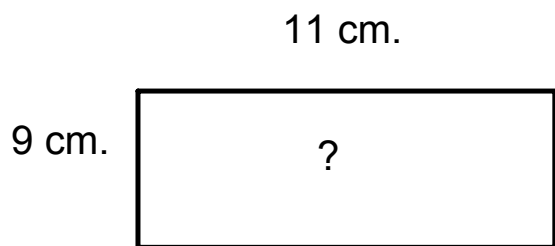
How to find it:
Multiply the length times the width

Example:



Real World use:
finding the square feet in the inside of the classroom

Area Examples



Area Word Problems

Example) A book had a length of 5 inches and a width of 12 inches. What is the area of the book?

Example) Susie was cutting some fabric for her friend. The fabric had a width of 6 inches and an area of 42 square inches. What is the length of the fabric?

Example) Joey had a rug that was 5 feet long and 6 feet wide. Rebecca had a rug that was 4 feet long and 6 feet wide? Whose rug had the largest area? Show your work!

Working With Place Value to Add

Expanded form- Breaking apart a number by its place value

Ex) 427

Four hundred + twenty + seven

$$400 + 20 + 7$$

Ex) Add the following numbers using expanded form.

$$123 + 162 = \underline{\hspace{2cm}}$$

$$100 + 20 + 3$$

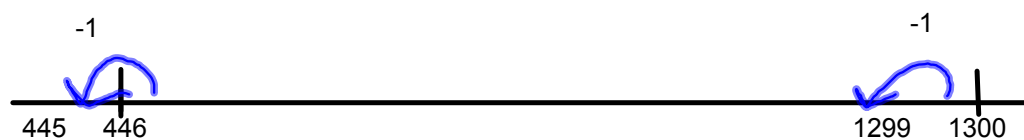
$$\underline{100 + 60 + 2}$$

$$200 + 80 + 5 = 285$$

Working With Place Value to Subtract

Ex) Subtract the following numbers using expanded form.

$$1300 - 446 = \underline{\hspace{2cm}}$$



* You have to take the same amount from both sides of the line!

$$\begin{array}{r} 1299 \\ -445 \\ \hline \end{array}$$

Example Word Problems

1) The weights in the gym are 150 pounds, 200 pounds, 55 pounds, and 45 pounds. How heavy are all the weights combined?

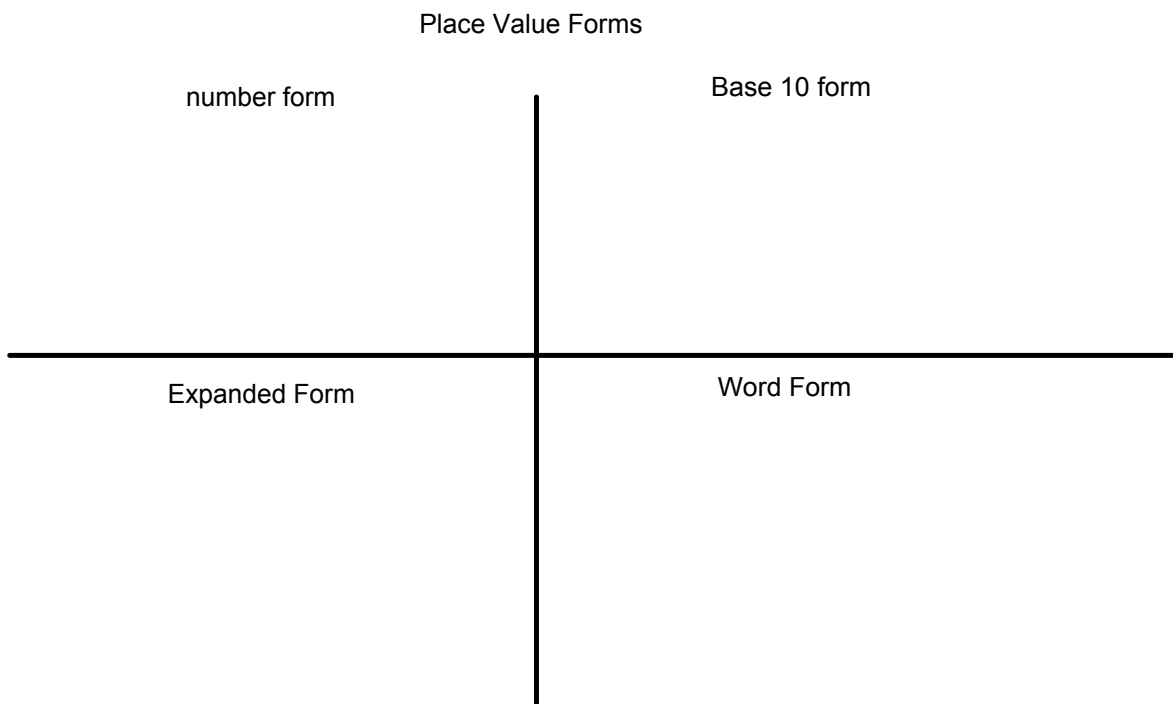
2) Miss Edwards was on a TV Game Show. She won \$5,500 total. During round one, she won \$1,500. During Round 2 she won \$2,000. How much did she win on round 3?

3) At Lakewood Elementary, there are 650 students. 37 students are absent. How many students came to school?

Place Value

_____, _____, _____, _____, _____
Ten thousands, thousands, hundreds, tens, ones

Ex) 570- The 7 in the tens place represents the number 70.



Continuing with Expanded Form & Condensed Form

Example) What number is expressed by the sentence below?

$$(6 \times 10,000) + (2 \times 1,000) + (1 \times 100) + (6 \times 10) + (1 \times 1) =$$

Example) How many tens are in the following numbers?

600- ____ tens

70- ____ tens

5,000- _____ tens

Example) Write out the name in word form for this number- 4,205.

Example) What number is represented by this name?

6,456

Example) Write the number that has 3 thousands, 1 hundred, 6 tens, and 5 ones.

Introduction to Fractions

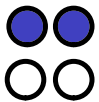
- Fractions are numbers that look different!
- Numerator- the top number in a fraction that tells us how many pieces of a whole we need to consider
- Denominator- the bottom number in a fraction that tells us how many parts the whole has been divided into



1 out of the 5 pieces is yellow.

- Equivalent fractions- fractions that are equal

Example) $\frac{1}{2} = \frac{2}{4}$



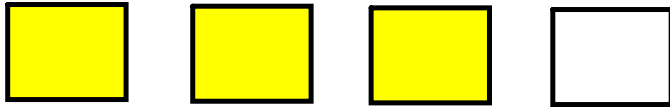
Equivalent Fractions

- Remember that fractions are spoiled rotten brats! What you do to the top (numerator), you also have to do to the bottom (denominator).

Example) $\frac{1}{2} = \frac{\quad}{4}$

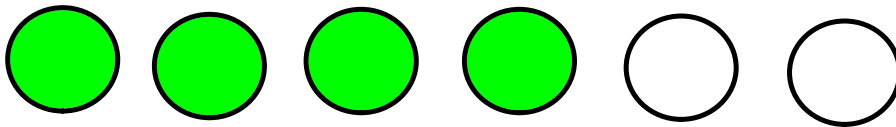
Example) $\frac{\quad}{4} = \frac{2}{8}$

Equivalent Fractions Practice



Which fraction is equivalent to the number of shaded boxes above?

- A. $\frac{1}{2}$
- B. $\frac{1}{3}$
- C. $\frac{6}{8}$
- D. $\frac{4}{4}$



What is the fraction represented by the shaded circles?

- A. $\frac{2}{3}$
- B. $\frac{5}{6}$
- C. $\frac{2}{6}$
- D. $\frac{1}{3}$

Decimals Continued

decimal- a different kind of number meaning 10

- A quantity that is less than that is between whole numbers is known as a decimal or a fraction.

Example) 1, 1.5, 2, 2.3, 3, 3.4

1, $1 \frac{1}{2}$, 2, $2 \frac{3}{4}$, 3, $3 \frac{1}{4}$

- The numbers to the left of the decimal point are whole numbers. The numbers to the right of the decimal point are parts of whole numbers.

Example) 123.658

Beginning with Decimals

Decimal Place Value

hundreds tens ones . tenths hundredths thousandths

456.987

Examples)

1/10	0.1	.1	one tenth
5/10	0.5	.5	five tenths
1/100	0.01	.01	one hundredth
5/100	0.05	.05	five hundredths

Greater Than, Less Than, Equal To Fractions and Decimals

Fractions) Fill in the blank with $<$, $>$, $=$.

$$\frac{1}{3} \text{ ____ } \frac{1}{2}$$

$$\frac{2}{2} \text{ ____ } \frac{3}{4}$$

$$\frac{1}{3} \text{ ____ } \frac{2}{6}$$

Decimals) Fill in the blank with $<$, $>$, $=$.

$$0.26 \text{ ____ } 0.2$$

$$0.61 \text{ ____ } 0.5$$

$$0.50 \text{ ____ } 0.7$$

Adding Fractions

- When you are adding fractions with like denominators, you add the numerator, but the denominator stays the same.

Example) $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

Example) $\frac{1}{8} + \frac{5}{8} =$

Example) Miss Edwards has a candy bar. She is sharing it with her friend Ellie. Ellie gets $\frac{1}{8}$ and Miss Edwards gets $\frac{3}{8}$. How much did they eat altogether? Show a picture to explain your thinking.

Subtracting Fractions

- When you are subtracting fractions with like denominators, you subtract the numerator, but the denominator stays the same.

Example) $\frac{4}{4} - \frac{2}{4} = \frac{2}{4}$

Example) $\frac{7}{8} - \frac{5}{8} =$

Example) Charles has $\frac{6}{8}$ of a pizza left from his birthday party. He can't eat it all, so he shares $\frac{2}{8}$ of the pizza with his brother Jake. How much pizza does Charles have left after sharing with Jake? Draw a picture to explain your thinking.

Adding and Subtracting Mixed Numbers

- When you are adding and subtracting mixed numbers, add or subtract the fractions first. Then, focus on the wholes.

$$\begin{array}{r} \text{Example) } 5 \frac{1}{4} \\ + 3 \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} \text{Example) } 7 \frac{6}{8} \\ - 2 \frac{5}{8} \\ \hline \end{array}$$

Example) Mrs. Julia is baking a pie. She needs $4 \frac{1}{4}$ cups of sugar and $2 \frac{2}{4}$ cups of milk. How many cups of ingredients does she need altogether?

Fractions Greater Than 1

- Steps to change a fraction greater than 1 to a mixed number:

1. Divide the numerator by the denominator.
2. Find the whole number. The whole number is the number of times the denominator divides into the numerator.
3. Make the remainder the new numerator.

Example) $4/3 = 1 \frac{1}{3}$

Example) $7/2 = 3 \frac{1}{2}$

Example) 10 people have $1/4$ of a pie. How much pie do they have total? Express your answer as a mixed number, and use a picture to explain your thinking.

Multiplying Fractions by a Whole Number

- When you are multiplying fractions by a whole number, you make the whole number the numerator and its denominator 1. Multiply the numerators and the denominators.

Example) $3 \times \frac{1}{4} = \frac{3}{1} \times \frac{1}{4} = \frac{3}{4}$

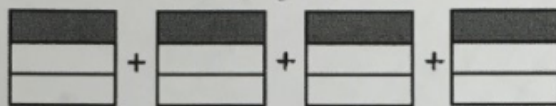
Example) $7 \times \frac{5}{8} = \frac{7}{1} \times \frac{5}{8} = \frac{35}{8} = 4 \frac{3}{8}$

Example) Miss Edwards needs 4 batches of muffins for the bake sale. Each batch requires $\frac{3}{4}$ cups of flour. How much flour does she need? Show a picture to explain your thinking.

Name: _____ Date: _____ Score: _____

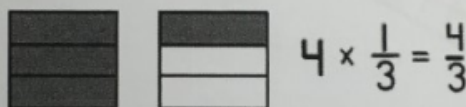
Understanding Fraction Multiplication #1

When multiplying a fraction by a whole number, you are adding equal parts of a whole a given number of times. For instance, when multiplying $\frac{1}{3}$ by 4, you are adding $\frac{1}{3}$ four times...



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

This is the same as...



Use the models to find the product of each.

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

$5 \times \frac{1}{2} = \text{---}$

$5 \times \frac{1}{3} = \text{---}$

4.NF.4

Unit Fractions

- A unit fraction is a fraction where the numerator is 1 and the denominator is either 1 or a number greater than 1.

Examples of unit fractions: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$

Complete the multiplication equation below using a unit fraction and a whole number.

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \frac{4}{9}$$

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \frac{6}{7}$$

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \frac{8}{7}$$

Measurement Equivalents	
Distance	
<u>U.S. Standard Units</u>	<u>Metric Units</u>
1 yard = 3 feet	1 kilometer = 1,000 meters
1 foot = 12 inches	1 meter = 100 centimeters
Weight and Mass	
<u>U.S. Standard Units</u>	<u>Metric Units</u>
1 pound = 16 ounces	1 kilogram = 1,000 grams
Capacity	
<u>U.S. Standard Units</u>	<u>Metric Units</u>
1 gallon = 4 quarts	1 liter = 1,000 milliliters
1 quart = 2 pints	
1 pint = 2 cups	
Time	
1 hour = 60 minutes	
1 minute = 60 seconds	

Using Number Lines with Time

A train left Massachusetts at 10:26 A.M. and arrived in Albany at 5:13 P.M. How long did it take the train to travel from Massachusetts to Albany?



Using the area model with money

Logan earns \$6.15 per hour working at the pet store. Every week Logan works 14 hours. How much money does Logan make each week?

	\$6	\$.15	
10	10x6 \$60	10x\$.15 \$1.50	\$60.00 \$ 1.50 \$ 24.00 + \$.60 \$ 86.10
4	4x\$6 \$24	4x\$.15 \$.60	

Rounding

Step 1: Find the rounding place and underline it.

Example) Round to the nearest tens place. 527

Step 2: Look at the digit (number) next door and put a box around it.

Example) 527

Step 3: Ask "4 or Less?" or "5 or more?"

Ex) 527 rounds to 530

Step 4: 4 or less, let it rest!

Step 5: 5 or more, raise the score!

Step 6: Everything after the rounded number changes to a 0.

Partial Quotients

$$265 \div 4 = 66 \text{ r. } 1$$

Joanna has 265 story books. She has already read most of them, so she is keeping some and splitting the rest between her 3 friends. If there are any left over, she is going to donate them to the school library. How many story books will each person have? Will there be any books left over?

$$\begin{array}{r} 50 \\ 10 \\ 2 \\ 4 \end{array}$$

$$\begin{array}{r} 50 \\ 10 \\ 2 \\ 4 \end{array}$$

$$\begin{array}{r} 50 \\ 10 \\ 2 \\ 4 \end{array}$$

$$\begin{array}{r} 50 \\ 10 \\ 2 \\ 4 \end{array}$$

$$265 - 200 = 65$$

$$65 - 40 = 25$$

$$25 - 8 = 17$$

$$17 - 16 = 1$$

Strategies for Solving 2 Step Problems!

1. Take it piece by piece.
2. Underline the question, circle important information.
3. Cross out information you don't need.

SAMPLE:

At the town carnival, Billy rode the Ferris wheel 7 times. He rode the bumper cars 3 times. If each ride cost 5 tickets, how many tickets did he use that day?

1. $7 + 3 = 10$ rides
2. $10 \times 5 = 50$ tickets
- 3.

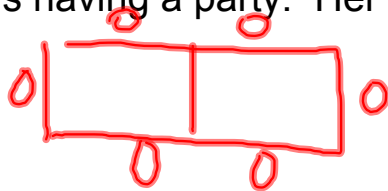
Answer:

Patterns

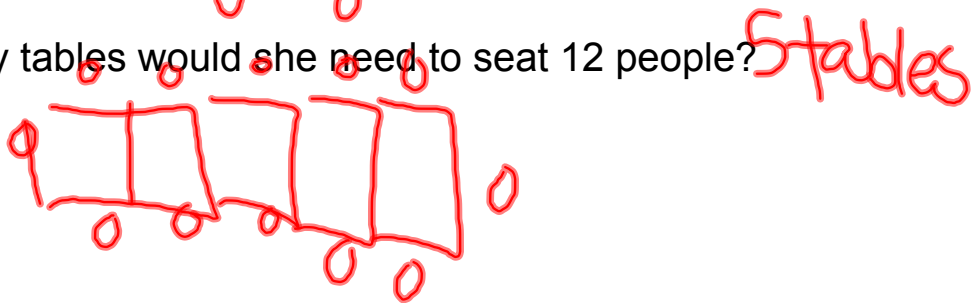
Ex) Miss Edwards is collecting canned goods for the food bank. On the first day, she collects 10 cans. Each day, She adds 6 more to her collection. How many cans will she have on day 7?

10, 16, 22, 28, 34, 40, 46 cans

Miss Edwards is having a party. Her seating chart looks like this.



How many tables would she need to seat 12 people?

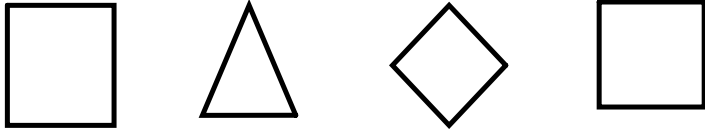


Patterns Continued

Ex) Mr. Johnson is counting using the rule $n+6$. Complete the pattern below using this same rule.

18, 24, 30, ____, ____, ____, ____, ____

Ex) What will be the 15th shape in the pattern below?



Attachments

Friction Lab.docx