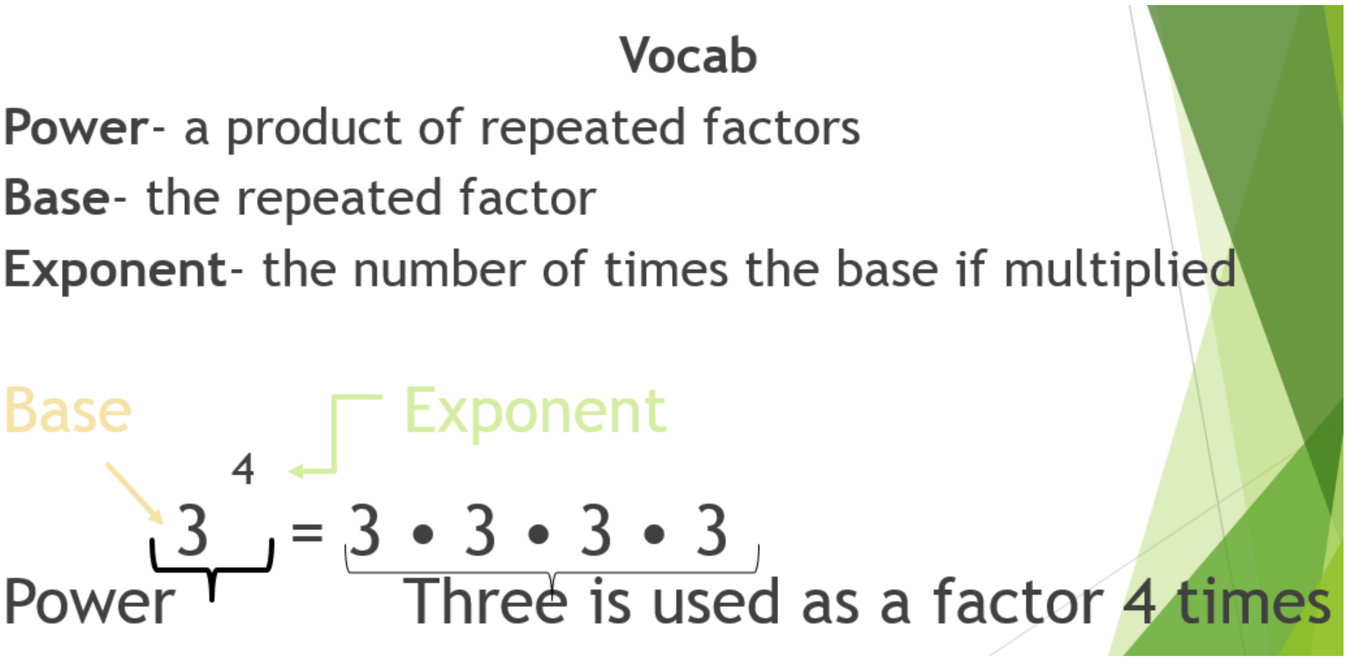
Station 1- Powers

Book Pages 12-13, & 45



Example:

1. Evaluate the power 5^3

   $5 \times 5 \times 5 =$

   $5 \times 5 = 25$

   $25 \times 5 = 125$

Problems: Find the value of the Power

1. 7^3
2. 2^6
3. 4^4
4. 5^2
5. 8^3

Station 2 - Evaluating Expressions

Book Pages 16-21, 46

Order of Operations

1. Parentheses ( )
2. Exponents a^b
3. Multiply or Divide x/÷
4. Add or Subtract +/-

P.E.MD.AS.

Example:

$4^3 - 15 \div 5$

$64 - 15 \div 5$	Solve 4^3
$64 - 3$	Divide
$= 61$	Subtract

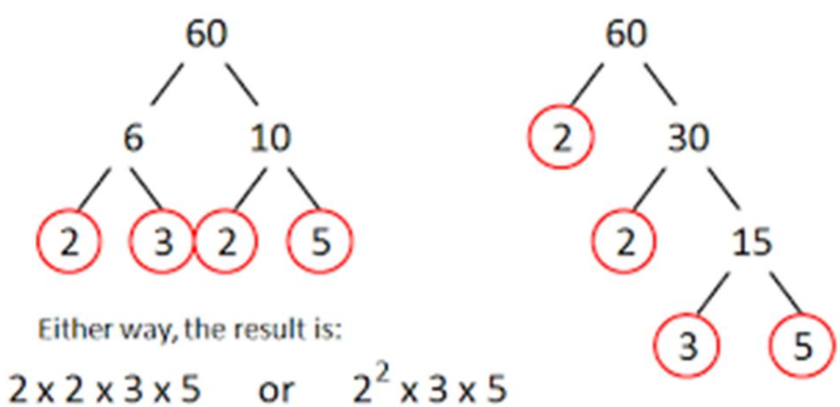
Problems: Evaluate the Expression

1. $3 \times 6 - 12 \div 6$
2. $20 \times (3^2 - 4) \div 50$
3. $5 + (4^2 + 2) \div 6$
4. $(6^2 - 3) \times (2 + 8)$
5. $4^3 \div 2 - (7 - 5)^2$

Station 3 – Prime Factorization

- Prime- only divisible by itself and 1.
- Composite- divisible by another number other than itself and 1.
- Factor Pair
- Example: 5 x 4 = 20 → 5 and 4 are a factor pair
- Prime Factorization – a number written as a product of its prime factors.
- Example: 20 → Prime Factorization → $2^2 \bullet 5$

Factor Trees can be used to find prime factorization. Example:



Problems: Find the prime factorization of the following;

1. 42
2. 50
3. 66
4. 28
5. 63

Station 4 – Greatest Common Factor (GCF)

- **Common Factors** – factors that two or more numbers share.
- **Greatest Common Factors (GCF)**- the highest number among the common factors.
- Method 1 – Using lists of factors.

Step 1 – list the factors of each number

Step 2 – identify all common factors

Step 3 – Find the highest number out of the common factors

Example:

Factors of 24: 1, 2, 3, 4, 6, <u>8</u>, 12, 24

Factors of 40: 1, 2, 4, 5, <u>8</u>, 10, 20, 40

GCF = 8

Problems: Find the GCF for each set of numbers

1. 27, 45
2. 30, 48
3. 28, 48, 64
4. 24, 90
5. 52, 68

Station 5 – Least Common Multiple

- **Common Multiples-** multiples shared by two or more numbers.
- **Least Common Multiple (LCM)-** the smallest common multiple.

1. List multiples of each number.
2. Circle common multiples
3. Identify the smallest common multiple

Example: Find the LCM of 4 and 6

4: 4, 8, 12, 16, 20, 24, 28, 32, 36

6: 6, 12, 18, 24, 30, 36

LCM = 12

Problems: Find the LCM of each set of numbers

1. 4,14
2. 6, 20
3. 12, 28
4. 10, 12
5. 18, 27

Station 6 – Multiplying and Dividing Fractions

Multiplying Fractions

Line fractions horizontally
Ex: $\frac{2}{5} \cdot \frac{3}{8}$

Simplify if possible
Ex: $\frac{2}{5} \cdot \frac{3}{8} \rightarrow \frac{1}{5} \cdot \frac{3}{4}$

Multiply Numerators
Ex: $\frac{1}{5} \cdot \frac{3}{4} = \frac{3}{\square}$

Multiply Denominators
Ex: $\frac{1}{5} \cdot \frac{3}{4} = \frac{3}{20}$

Simplify if possible

Dividing Fractions

Multiply by the reciprocal of the 2nd fraction.

Ex: $\frac{1}{5} \div \frac{3}{4} = \frac{1}{5} \cdot \frac{4}{3} = \frac{4}{15}$

*Change all mixed fractions and whole numbers to improper fractions.

FLIP AND MULTIPLY!!!!

Problems:

1. $1\frac{1}{3} \bullet \frac{2}{3}$
2. $6\frac{2}{3} \bullet \frac{3}{10}$
3. $\frac{1}{8} \div \frac{1}{4}$
4. $10 \div \frac{5}{12}$
5. $\frac{2}{9} \div \frac{2}{3}$

Station 7- Adding and Subtracting Decimals

Step 1: Line decimals up

Step 2: Add or subtract like a regular addition or subtraction problem.

Examples:

19.2	45.6
+2.3	-12.8

Problems:

1. 23.6 + 12
2. 137.2 + 48. 4
3. 34.65 + 12.16
4. 123.65 – 14.6
5. 52 – 14.2

Station 8 – Multiplying and Dividing Decimals

Multiplying Decimals

- Multiply just like whole numbers.
- Then count the number of digits to the right of the decimal point. In the product, move the decimal that many places to the left.

$$\begin{array}{r} 13.91 \\ \underline{\times\ \ 7} \\ 97.37 \end{array} \qquad\qquad \begin{array}{r} 6.218 \\ \underline{\times\ 4} \\ 24.872 \end{array}$$

Dividing Decimals

- Place the decimal point in the quotient above the decimal point in the dividend. Then divide as you would with whole numbers. Continue until there is no remainder.

$$\begin{array}{r} 1.83 \\ 4 \,\overline{)\ 7.32} \end{array}$$

Problems:

1. 6.1 x 7
2. .27 x 4.42

3. .051 x .244
4. 6.8 ÷ 4
5. 22.23 ÷ 3.9

Station 9 – Evaluating Expressions #2

Example: Evaluate the expression when x = 48 and y = 8;   x ÷ y

48 ÷ 8 Substitute 48 in for x and 8 in for y.

= 6 Divide and solve.

*Substitute the numbers in for the variables.

Problems:

Evaluate the expression when x = 20 and y=4

1. x ÷ 5
2. y + x
3. 8y – x
4. In a video game, you score *p* points and *b* triple bonus points. An expression for your score is *p* + 3*b*. What is your score when you earn 245 game points and 20 triple bonus points?
5. Evaluate the expression y^2- 14 when y = 5.

Station 10 – Writing Expressions

Identify key words such as these:

Operation	Addition	Subtraction	Multiplication	Division
Key Words and Phrases	added to plus sum of more than increased by total of and	subtracted from minus difference of less than decreased by fewer than take away	multiplied by times product of twice of	divided by quotient of

Use them to write expressions.

Example: Write the phrase as an expression. 8 fewer than 21.

8 <u>fewer than</u> 21 → fewer than usually means subtraction. 8 fewer in this case, or 8 less. That means I'm starting with something (21) and have to take away 8 from it.

21 – 8

Problems:

1. 5 less than 8
2. The product of 3 and 12
3. A number *b* squared.
4. Twice a number *z*
5. 7 increased by a number *w*

Station 11- Simplifying and Identifying Properties

- <u>Communitive Property</u>- Switching the order of numbers does not matter. (+, x)
- Example:

15 +16 = 16 +15

a + b = b + a

- <u>Associative Property</u> – changing the group of numbers we solve first doesn't matter. (+, x)
- Ex:

(3 + 4) + 5 = 3 + (4 +5)

(a + b) +c = a + (b + c)

- <u>Distributive Property</u> –

Examples

1. 3(7 +2) = (3 x 7) + (3 x 2)
2. a(b + c) = ab + ac

<u>Property of 0's and 1</u> – If there is a 0, specify whether it is the addition or multiplication property of 0. Property of 1 is only mentioned with multiplication.

Problems:

Tell which property the statement illustrates

1. $x + 7.5 = 7.5 + x$
2. 2 + (12 + r) = (2 + 12) + r
3. (c + 2) + 0 = c + 2

Simplify

4. 8(3s)
5. (2.4 + 4n) + 9

Station 12 – Areas of Parallelograms and rectangles (and perimeter)

Perimeter – Distance around the edge (all sides added up)

Area- measure of the inside of a shape.

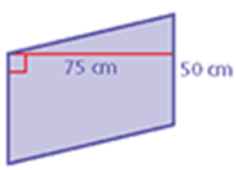
Area of a parallelogram= Area = base x height

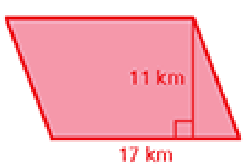
A = bh

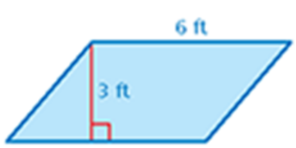
*Same as a rectangle

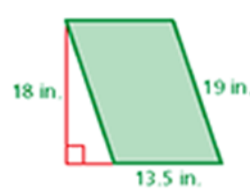
Problems: Find the area of the parallelogram.

1. 

2. 

3. 

4. 

5. 

Station 13 – Area of triangles

Area of Triangle = ½ of base x height

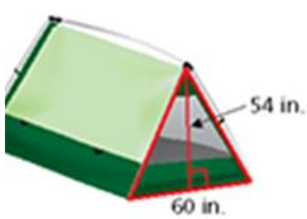
A = ½ bh

*You can also think of taking ½ of something as cutting it in half or dividing by 2. You can divide the base or the height by 2 as the first step if you prefer, or you can wait until after you have multiplied base and height to divide by 2. It works either way!

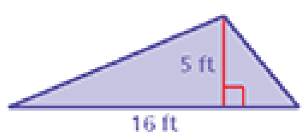
Problems: Find the area of each triangle.

1.

2.



3.



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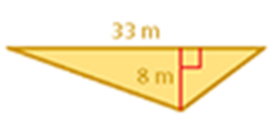


5.

Station 14- Area of Trapezoids

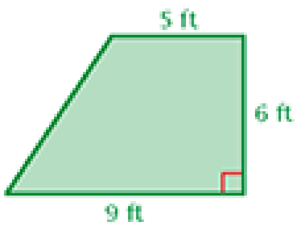
Area = ½ height x (base 1 + base 2)

A  = ½ h (b_1 + b_2)

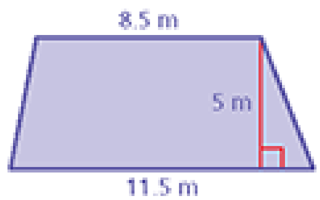
Examples:

Find the area of each trapezoid.

a.



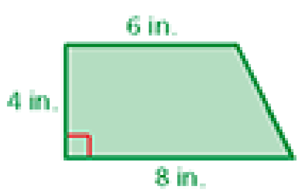
b.



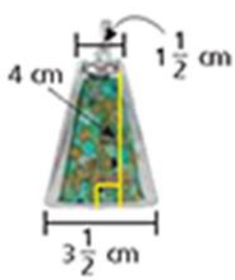
a.		b.
$A = \frac{1}{2}h(b_1 + b_2)$	Write formula.	$A = \frac{1}{2}h(b_1 + b_2)$
$= \frac{1}{2}(6)(5 + 9)$	Substitute.	$= \frac{1}{2}(5)(8.5 + 11.5)$
$= \frac{1}{2}(6)(14)$	Add.	$= \frac{1}{2}(5)(20)$
$= 42$	Multiply.	$= 50$

Problems: Find the area of the trapezoids

1.



2.



3. h= 6 in , b_1= 9 in, b_2= 11 in

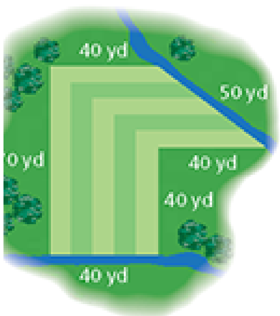
4. h= 22 cm , b_1= 10.5 cm, b_2= 12.5cm

5. h= 3 m , b_1= 6 m, b_2= 12 m

Station 15 – Areas of Figures

*Split figures into shapes with areas you already know (rectangles, parallelograms, triangles, trapezoids) and solve for each area individually. Add all areas at the end.

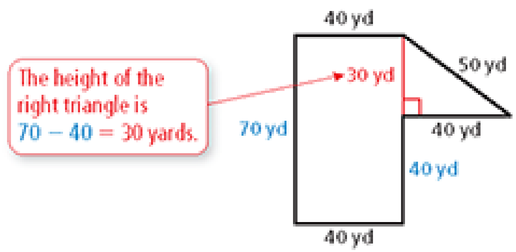
Example: Find the area of the composite figure.



Find the area of the fairway between two streams on a golf course.

There are several ways to separate the fairway into figures whose areas you can find using formulas. It appears that one way is to separate it into a right triangle and a rectangle.

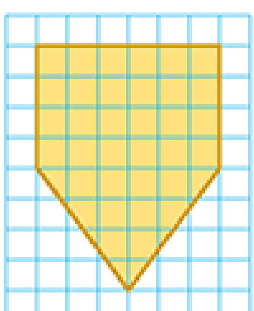
Identify each shape and find any missing dimensions.

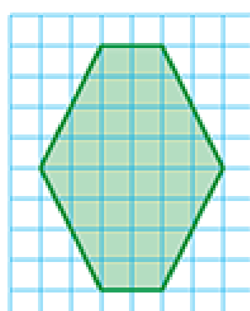


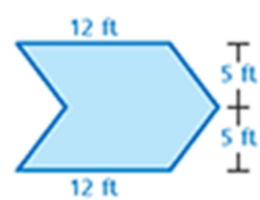
Area of Rectangle	*Area of Right Triangle*
$A = \ell w$	$A = \frac{1}{2}bh$
$= 70(40)$	$= \frac{1}{2}(40)(30)$
$= 2800$	$= 600$

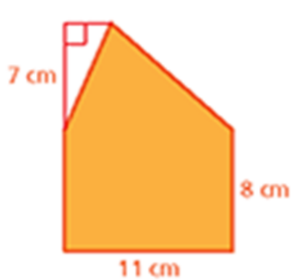
So, the area of the fairway is $2800 + 600 = 3400$ square yards.

Problems: Find the area of the composite figures.

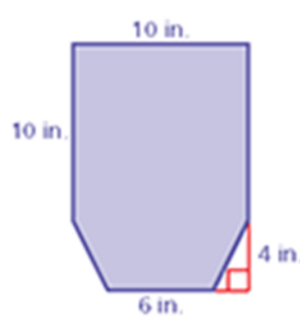
1. 

2. 

3. 

4. 

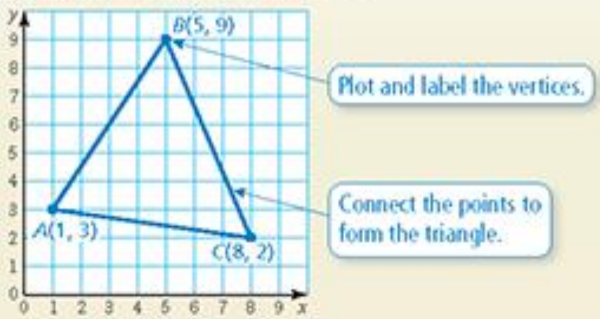
5. .



Station 16 – Coordinate Plane Shapes

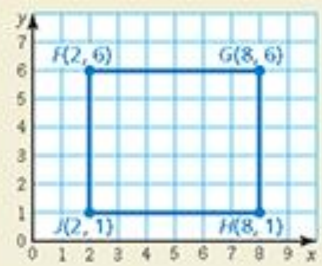
4.4 Polygons in the Coordinate Plane (pp. 174–179)

a. The vertices of a triangle are $A(1, 3)$, $B(5, 9)$, and $C(8, 2)$. Draw the triangle in a coordinate plane.



b. The vertices of a rectangle are $F(2, 6)$, $G(8, 6)$, $H(8, 1)$, and $J(2, 1)$. Draw the rectangle in a coordinate plane and find its perimeter.

Draw the rectangle and use the vertices to find its dimensions.



The length is the horizontal distance between $F(2, 6)$ and $G(8, 6)$, which is the difference of the x-coordinates.

length $= 8 - 2 = 6$ units

The width is the vertical distance between $G(8, 6)$ and $H(8, 1)$, which is the difference of the y-coordinates.

width $= 6 - 1 = 5$ units

So, the perimeter of the rectangle is $2(6) + 2(5) = 22$ units.

Problems: You might want to grab a piece of grid paper for these and attach to your packet.

Draw the polygon with the given vertices in a coordinate plane.

1. A(3,2), B(4,7), C(6,0)
2. K(3, 3 ½), L(5,7), M(8,7), N(6, 3 ½)

Find the <u>perimeter</u> and <u>area</u> of the polygon with the given vertices.

3. P(4,3), Q(4,7), R(9,7), S(9,3)
4. T(2,7), U(2,9), V(5,9), W(5,7)
5. W(11,2), X(11,8), Y(14,8), Z(14,2)

Station 17- Ratios

5.1 Ratios (pp. 190–195)

Write the ratio of apples to oranges. Explain what the ratio means.

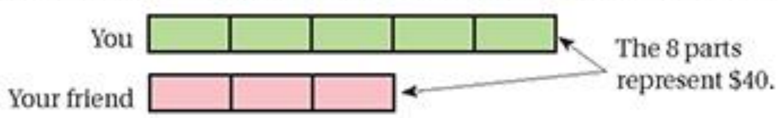
3 apples → 3 to 5 ← 5 oranges

So, the ratio of apples to oranges is 3 to 5, or 3 : 5. That means that for every 3 apples, there are 5 oranges.

EXAMPLE 2 Using a Tape Diagram

The ratio of your monthly allowance to your friend's monthly allowance is 5 : 3. The monthly allowances total \$40. How much is each allowance?

To help visualize the problem, express the ratio 5 : 3 using a tape diagram.



Because there are 8 parts, you know that 1 part represents $\$40 \div 8 = \$5$.

5 parts represent $\$5 \cdot 5 = \$25$.

3 parts represent $\$5 \cdot 3 = \$15$.

So, your monthly allowance is \$25, and your friend's monthly allowance is \$15.

Problems: Write the ratios and explain what the ratio means.

1. butterflies : caterpillars

2. saxophones : trumpets

3. During a checkers game there are 16 pieces left. The ratio of black to red is 3:5. How many black pieces are on the board?
4. There are 48 students in a school play. The ratio of boys to girls is 5:7. How many more girls than boys are in the play?

5. Twelve of the 28 students in a class have a dog. What is the ratio of students who have a dog to students who do not?

Station 18- Ratio tables

5.2 Ratio Tables *(pp. 196–203)*

Find the missing values in the ratio table. Then write the equivalent ratios.

Trees	2	6	
Birds	5		30

You can use multiplication to find the missing values.

Trees	2	6	12
Birds	5	15	30

The equivalent ratios are 2 : 5, 6 : 15, and 12 : 30.

Problems: Fill in the missing values in the ratio tables.

1.

Boys	1	
Girls	5	10

2.

Taxis	6		36
Buses	5	15	

3.

Burgers	3		9
Hot Dogs	5	10	

4.

Towels	14	7	
Blankets	8		16

5.

Forks	16	8	
Spoons	10		30

Station 19 – Unit Rates

Unit Rate- a quantity compared to 1.

Finding a Unit Rate

* Divide ratio and replace b with 1

a:b → a/b:1

Ex: Find a unit rate for $20:5 cans

20:5 → 20/5 : 1 → $4:1can

Using a Unit Rate

How much money would you get for 7 cans?

Since the unit rate is $4 for 1 can, we know that we can take $4 x 7 to find the value of 7 cans. 4 x7 = 28 cans.

Problems:

1. 12 stunts in 4 movies
2. 3600 stitches in 3 minutes
3. 342 tickets sold in 3 minutes.
4. A horse can run 165 feet in 3 seconds. At this rate how far can the horse run in 5 seconds.
5. A song has 28 beats in 4 seconds. At this rate, how many beats are there in 30 seconds?

Station 20- Comparing ratios

*You have to find a common multiple or factor! Treat like a fraction.

<u>Steps to compare ratios using a ratio table...</u>

1. Set up a ratio table
2. Choose the values you want to make equal
3. Find a common multiple or factor of those values
4. Form rates with common multiple or factor
5. Compare

Ex.

There are 24 grams of sugar in 6 fluid ounces of Soft Drink A, and there are 15 grams of sugar in 4 fluid ounces of Soft Drink B. Which soft drink contains more sugar in a 12-ounce can?

Use ratio tables to compare the soft drinks.

Soft Drink A

×2

Sugar (grams)	24	48
Volume (fluid ounces)	6	12

×2

Soft Drink B

×3

Sugar (grams)	15	45
Volume (fluid ounces)	4	12

×3

The tables show that a 12-ounce can of Soft Drink A has 48 − 45 = 3 more grams of sugar than Soft Drink B.

So, a 12-ounce can of Soft Drink A has more sugar.

Problems:

rmine which car gets the better gas mileage.

Car	A	B
Distance (miles)	125	120
Gallons Used	5	6

4.

Car	A	B
Distance (miles)	300	320
Gallons Used	8	10

Car	A	B
Distance (miles)	450	405
Gallons Used	15	12

6.

Car	A	B
Distance (miles)	360	270
Gallons Used	20	18

ermine which is the better buy.

Air Freshener	A	B
Cost (dollars)	6	12
Refills	2	3

Station 21- Percents

- Writing Percents as Fractions – write percents as fractions with a denominator of 100

Example: Write 30% as a fraction

30% → $\frac{30}{100}$ → simplify → $\frac{3}{10}$

- Writing Fractions as percents - Write equivalent fraction with a denominator of 100, then write numerator as %

Example: Write $\frac{3}{10}$ as percent.

$$\frac{3}{10} \rightarrow \frac{30}{100} \rightarrow 30\%$$

OR Divide the numerator by the denominator and then move the decimal place over to the right twice (multiply by 100).

3 ÷10 = .3 → 30%

Problems: Write the percent as a fraction or the fraction as a percent.

1. 12%
2. 88%
3. .8%
4. $\frac{3}{5}$
5. $\frac{43}{25}$
6. $1\frac{21}{50}$

Station 22 – Find Percents and Wholes

Finding percent **OF** a number

Method 1- Mental Math Example:

23% of 80

10% of 80 = 8

...so 20% is the same as two 10%'s or 8 + 8 or 16

1% of 80 = .8

3% is the same as three 1%'s so .8 + .8 +.8 or 2.4

That means 23% of 80 must be 16 + 2.4 = 18.4

Method 2 – Multiply by a decimal.

- Step1 – Write % as a decimal
- Step 2 – Multiply by the whole #
- Ex: 20% of 60 is what number?

20% → .2

.2 x 60 = 12

Finding the whole

- Part ÷ % = whole
- Ex: 75% of what number is 48?

$48 \div .75 =$

$48 \div .75 = 64$

Station 22

Problems:

Find the percent of the number.

1. 60% of 80
2. 80% of 55
3. 150% of 48
4. 70% of what number is 35?
5. 140% of what number is 56?

Station 23 – Converting

If the measures are metric, (meters, grams, liters) then use KHDBdcm (king henry died by drinking chocolate milk)

K (kilo)

H (hector)

D (deca)

B (base; meter, gram, liter)

d (deci)

c (centi)

m (mili)

Example: How many millimeters in 13 meters?

K H D B d c m

13

Meter is a base so we start at B. To get to millimeters we would have to move to the right 3 places. Add a decimal on to the end of the 13 and move over 3 times! Add 0's into the empty spaces.

13 m = 13000 mm

Problems:

1. How many meters are in 5 kilometers?
2. 12 mL = _____ L
3. 8 Dg = _____ cg
4. 15 mm = ______dm
5. 111.5 mg = ______ g

Station 24- Integers and Negative Numbers

*An integer is any whole number and its opposite (fractions are not included) *Think of negative numbers like a thermometer or sea level, anything below 0 is negative.

Problems:

Graph the integer and its opposite

1. -7

Order the Integers from least to greatest.

2. -5, 4, 2, -3, -1
3. 5, -20, -10, 10, 15

Graph the number and its opposite.

4. $-1\frac{3}{4}$

Copy and complete the statement using < or >

5. -3.27 ____ -2.68

Station 25 – Absolute Value

*Absolute value is how far away from 0 a number is. For example if I have a point at -4, it is 4 values away from 0, so the absolute value of -4 is 4. Absolute value is always positive! Absolute value symbols = l l

Problems:

Find the absolute value.

1. | -8 |
2. $|3\frac{6}{7}|$

Copy and complete the statement using <, >, or =

3. l -2 l ____ 2
4. l 4.4 l ____ l -2.8 l
5. $|\frac{1}{6}|$ _____ $|-\frac{2}{9}|$

Station 26 – Coordinate Plane

No Notes for this one! You're going to have to look up anything you don't know on pg. 276 in the green math book.

Problems

1. Please draw a coordinate plane labeling each quadrant, axis, and origin.
2. Give an example of an ordered pair **<u>and</u>** tell me which number represents each axis.

Plot the ordered pair in a coordinate plane. Describe the location of the point. (All points may be plotted on one coordinate plane).

3. A (-4, -2)
4. B (0, -3)
5. C(-1, 2)

Station 27 – Writing Equations

*When writing equations look for key words to tell you what numbers and operations to use. Ignore everything else.

Problems:

Write the word sentence as an equation

1. 9 times a number b is 36.
2. 5 is one-forth of a number c.
3. 11 is the quotient of a number y and 6.

Which is different? Write “both” equations.

4.
   a) 4 less than a number n is 8
   b) A number n is 4 less than 8.
   c) A number n minus 4 equals 8.
   d) 4 subtracted from a number n is 8.

Write an equation

5. You sell instruments at a Caribbean music festival. You earn $326 by selling 12 sets of maracas, 6 sets of claves, and x djembe drums. Write an equation you can use to find the number of djembe drums you sold.

Station 28 – Solving Equations using + and –

*To solve equations, simplify and then always use inverses (the opposite operation from what is being shown in the equation)

Examples:

b. Solve $18 = x - 7$.

$18 = x - 7$	Write the equation.
$+7 \qquad +7$	Addition Property of Equality
$25 = x$	Simplify.

The solution is $x = 25$.

Check

$18 = x - 7$

$18 \stackrel{?}{=} 25 - 7$

$18 = 18$ ✓

Problems:

Solve the equation

1. f – 27 = 19
2. a + 5.5 = 17.3
3. 22 + 15 = d - 17

Tell whether the given value is a solution of the equation.

4. w + 23 = 41; w = 28
5. s – 68 = 11; s=79

Station 29 – Solving equations using multiplication and division

EXAMPLE 1 Solving Equations Using Multiplication

a. Solve $\frac{w}{4} = 12$.

	$\frac{w}{4} = 12$	Write the equation.
Undo the division. →	$\frac{w}{4} \cdot 4 = 12 \cdot 4$	Multiplication Property of Equality
	$w = 48$	Simplify.

The solution is $w = 48$.

Check

$\frac{w}{4} = 12$

$\frac{48}{4} \stackrel{?}{=} 12$

$12 = 12$ ✓

b. Solve $\frac{2}{7}x = 6$.

	$\frac{2}{7}x = 6$	Write the equation.
Use the Multiplicative Inverse Property. →	$\frac{7}{2} \cdot \left(\frac{2}{7}x\right) = \frac{7}{2} \cdot 6$	Multiplication Property of Equality
	$x = 21$	Simplify.

The solution is $x = 21$.

EXAMPLE 2 Solving an Equation Using Division

Solve $5b = 65$.

	$5b = 65$	Write the equation.
Undo the multiplication. →	$\frac{5b}{5} = \frac{65}{5}$	Division Property of Equality
	$b = 13$	Simplify.

The solution is $b = 13$.

Check

$5b = 65$

$5(13) \stackrel{?}{=} 65$

$65 = 65$ ✓

Problems: Solve the equation

1. $\frac{s}{10} = 7$
2. $7x = 105$
3. 13 = d ÷6
4. $\frac{2c}{15} = 8.8$
5. $7b \div 12 = 4.2$

Station 30- Two variable equations

1 Identifying Solutions of Equations in Two Variables

Tell whether the ordered pair is a solution of the equation.

a. $y = 2x$; (3, 6)

$6 \stackrel{?}{=} 2(3)$ Substitute.

$6 = 6$ ✓ Compare.

So, (3, 6) is a solution.

b. $y = 4x - 3$; (4, 12)

$12 \stackrel{?}{=} 4(4) - 3$

$12 \neq 13$ ✗

So, (4, 12) is *not* a solution.

You can use equations in two variables to represent situations involving two related quantities. The variable representing the quantity that can change freely is the **independent variable**. The other variable is called the **dependent variable** because its value *depends* on the independent variable.

Problems: Tell whether the ordered pair is a solution of the equation.

1. $y = 4x$; (0,4)
2. $y = 5x - 10$; (3,5)
3. $y = x + 7$; (1,6)
4. $y = 7x + 2$; (2,0)
5. $y = 2x - 3$; (4,5)

Station 31 - Writing Inequalities

*Write just like equations only with inequality symbols replacing the equals sign.

Inequality Symbols				
Symbol	<	>	≤	≥
Key Phrases	• is less than • is fewer than	• is greater than • is more than	• is less than or equal to • is at most • is no more than	• is greater than or equal to • is at least • is no less than

Graphing Inequalities

- Step 1 – draw a number line
- Step 2 – graph the number shown in the inequality by plotting an open or closed circle on the number line. O = < or >, ●= ≥ or ≤
- Step 3 – Shade in the side of the number line that holds the values included in the inequality and draw an arrow at the end. (for example, if the inequality is x < 2, then that means x could be any number below two. Shade the line to the left of the two)

Problems

Write the word sentence as an inequality.

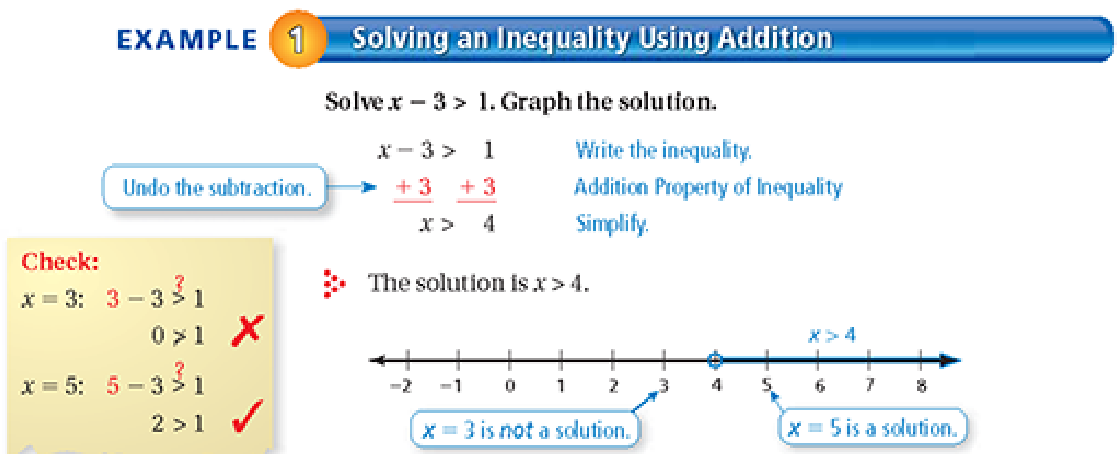
1. A number z is fewer than ¾
2. A number x divided by 3 is at most 5.

Graph the inequality

3. X < $\frac{2}{9}$
4. -3 ≥ x
5. 1.5 > f

Station 32 – Solving Inequalities

*Solve just like equations. You don't even have to worry about the symbol changing directions! Yet. At least not in 6th grade…

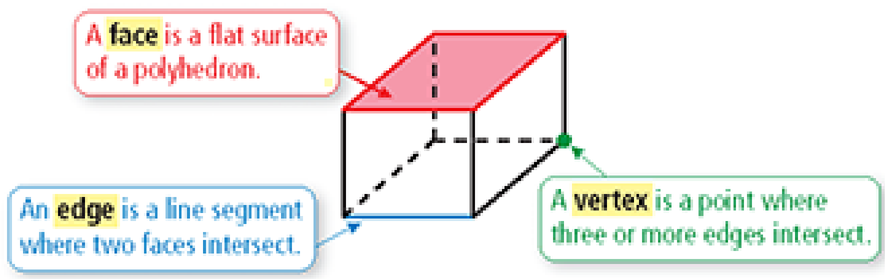


Problems: Solve the inequality <u>and</u> graph the solution

1. $x + 1 > 3$
2. $s - 1.5 < 2.5$
3. $b + 12 \leq 26$
4. $9n \geq 63$
5. $\frac{3}{11}k < 15$

Station 33 – Solids

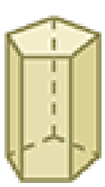
A **solid** is a three-dimensional figure that encloses a space. A **polyhedron** is a solid whose *faces* are all polygons.



Number	Root
4	Quad
5	Pent
6	Hex
7	Hept
8	Oct
9	Non

Problems: Find the name, number of faces, number of edges, and number of vertices of the solid.

1.



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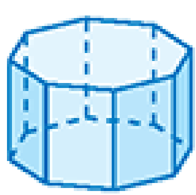

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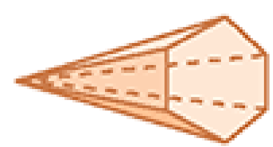

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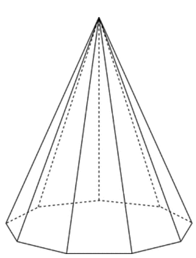

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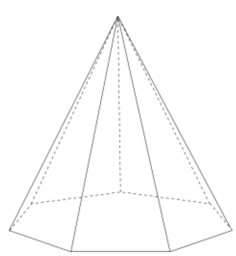
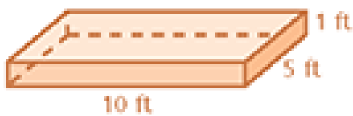
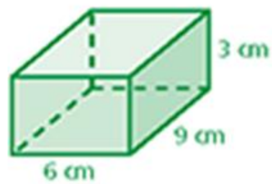


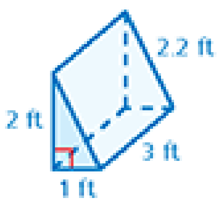
Station 34 – Surface Area of Prisms

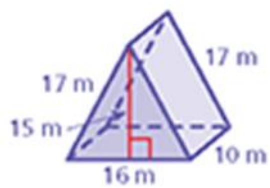
*Find the area of each shape that makes up the solid and then add the areas together to find the total surface area.

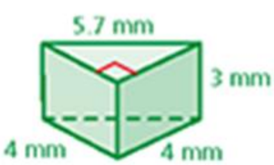
Problems: Find the surface area of the prism.







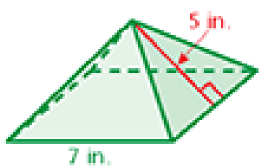


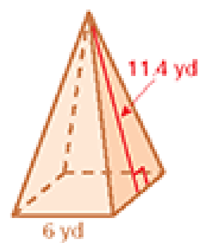


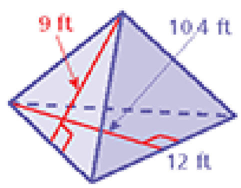
Station 35- Surface area of pyramids

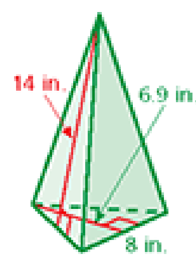
*Find the area of each shape making up the pyramid and add them together to get the total surface area.

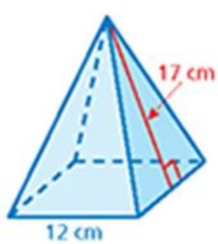
Problems: Find the surface area of each pyramid











Station 36- Volumes

*Always take the area of the base figure and multiply by the height. For the rectangular prism;   Volume = length x width x height

Problems: Find the volume of each rectangular prism.