

Warmup

1. Write 35% as a decimal number.

2. Multiply $\$24.85 \times 0.30$
(Round the answer to the nearest cent.)

3. Subtract $56.42 - 8.31$

4. $\$75 - 99\text{¢}$

5. Write 4.5% as a decimal

6.	Percent	Fraction	Decimal
	100		
	50		
	25		
	20		
	10		

I. Discount

Discount is the amount of money taken off the regular price.

Large Pie
Regular Price \$9



Today Only
\$2 off

This Week's Special
Buy 1 Get 1 Free

Colored Pencils
Regular Price \$1.50 a box



Summer-Sale
25% off



\$8.00
Rainbow Umbrellas

7. The tennis racket you want to purchase usually sells for \$125. How much is the discount with the current sale?



8. The local department store has a clearance sale of 90% off for backpacks. What is the discount for a \$65.99 backpack?



II. Sales Price

Sales Price is the reduced price paid for an item or items.

$$\text{Sale Price} = \text{Item price} - \text{discount}$$

How much is a large pizza today?

Large Pie
Regular Price \$9

Today Only
\$2 off

What is the sale price for 1 box of colored pencils? _____

What is the sale price for 2 boxes of colored pencils? _____



This Week's Special
Buy 1 Get 1 Free
Colored Pencils
Regular Price \$1.50 a box

What is the sale price for the umbrella?

Summer-Sale
25% off



\$8.00
Rainbow Umbrellas

To Calculate Sales Price

Write the percent as a decimal.

To change percent to a decimal number move the decimal point 2 places to the left.

Calculate the Discount

Multiply the item price by the percent (in decimal form)

Calculate the Sale Price

$$\text{Sale Price} = \text{Item price} - \text{discount}$$



\$26
Red Desk Chairs

Back-to-School Sale

20% off

What is the sale price for a \$26 red desk chair during the back-to-school sale?

What is the sale price for a \$5.95 calculator that is 15% off?



9. Water Bottles are on sale 30% off. Find the Sale price of a \$40 water bottle.

10. The local department store has a clearance sale of 90% off for backpacks. What is the sale price of a \$29.99 backpack?



III. Sales Tax

Sales Tax is the amount of money added to the purchase. The tax is collected at the time of the purchase and sent to the government.

Total Price = Cost of the item + Amount of Tax

* Some items are exempt from tax.

A puzzle cost \$10. How much does the puzzle cost after adding 5% tax?

What is the total cost of the tuxedo when tax is 8%?

Spring Clearance
20% off



11. A shirt costs \$35. How much does the shirt cost with 7.8% tax?

12. A sweater costs \$10.79. How much does the sweater cost with 4.4% tax?

IV. Practice

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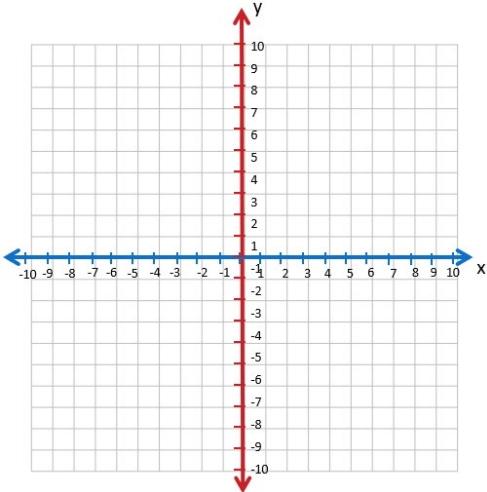
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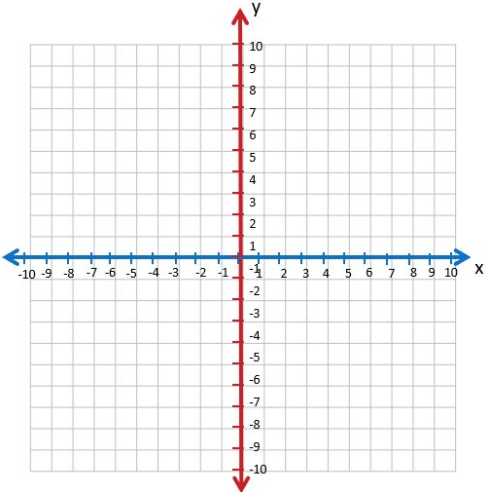
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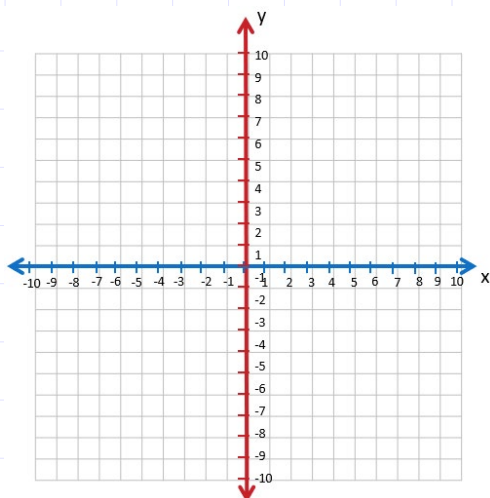
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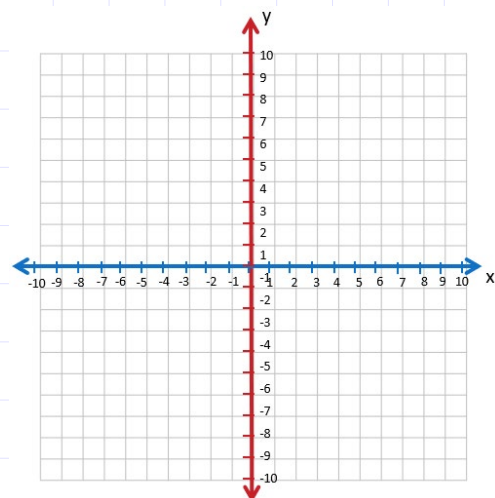
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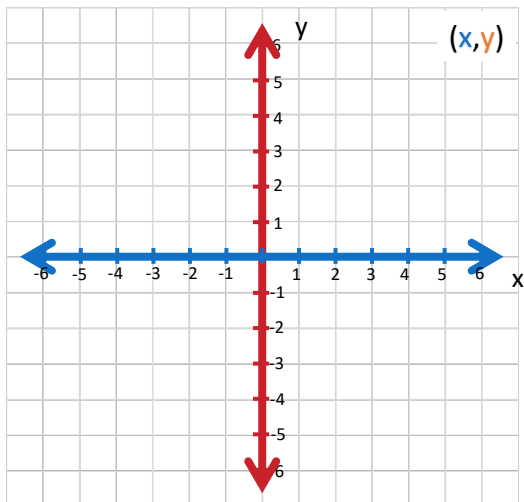
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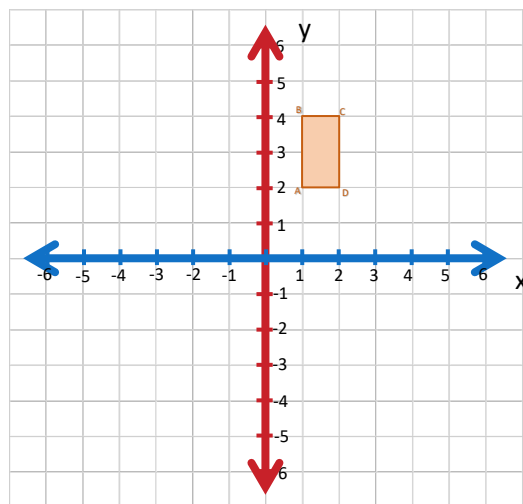
Date:

Warmup

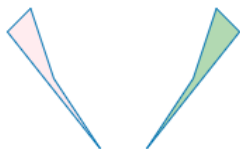
1. Use the points A:(-2,-5), B:(-3,-6), C:(-6,-6), D:(-5,-4) to graph a polygon, then identify it.



2. Plot the translation of the quadrilateral 4 to the right and 2 up.



3. What transformation is shown?



4. Identify each quadrilateral



(A) parallelogram

(B) trapezoid

(C) square

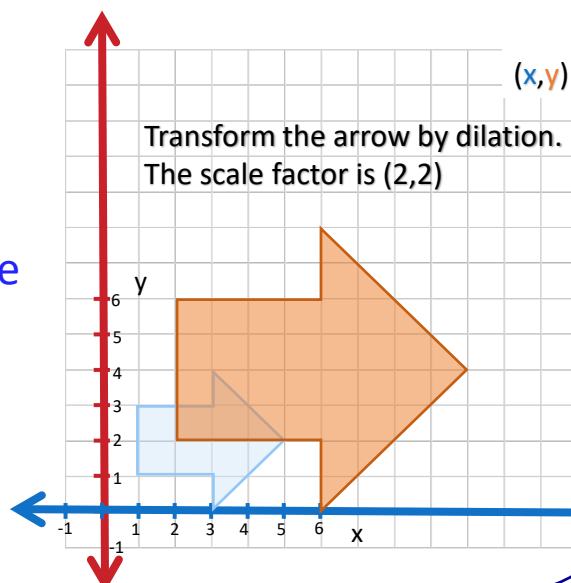
(D) Rhombus

(E) rectangle

I. Dilations

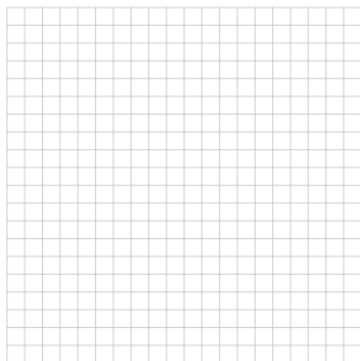
Dilation: The enlarging or shrinking of a figure on a plane or coordinate system by a scale factor.

Scale Factor: The amount the x and y-values are multiplied by to calculate the new coordinates of the figure.



Draw each figure.

A square with side = 4



The dilation with scale factor (3,3) of a square with side = 4



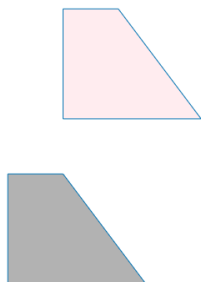
The dilation with scale factor (3,1) of a square with side = 4



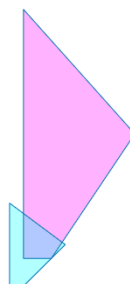
The resulting shape is a _____

The resulting shape is a _____

5. What transformation is shown?



6. What transformation is shown?



7. Plot the dilation of the quadrilateral with a (2,3) scale factor.

Quadrilateral ABCD is best defined as a _____

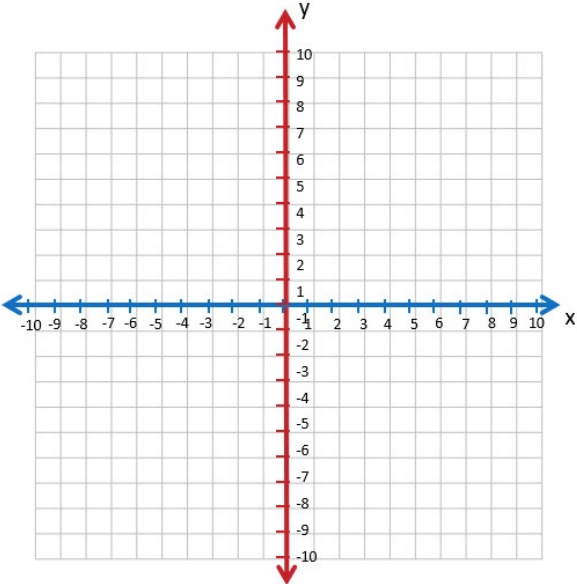


Plot the dilation of the quadrilateral with a (3,4) scale factor.

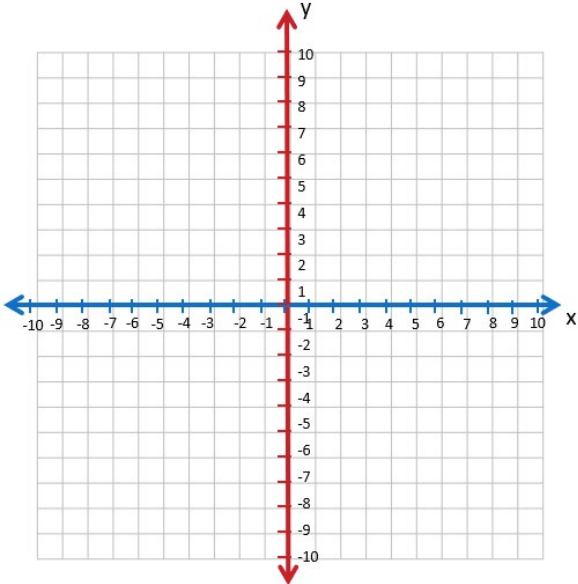
Quadrilateral ABCD is best defined as a _____

III. Practice

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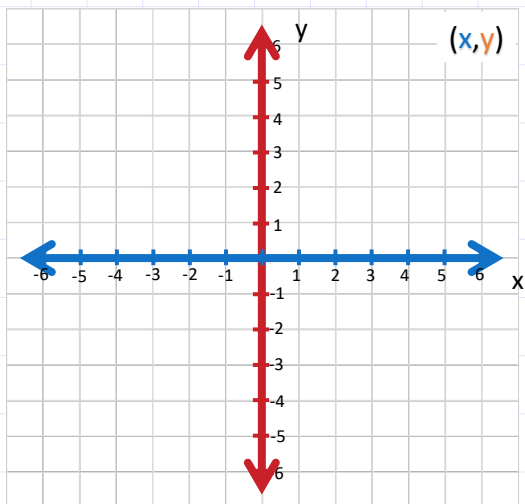
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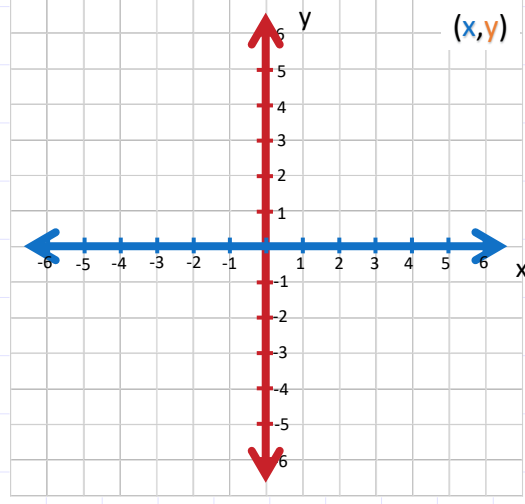
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Success Check # _____

Name:

Date:

Warmup

1. Simplify: $(4)(6c^5)$

2. Simplify: $(2x^3)(5x^8)$

3. $\frac{12}{-3} =$

4. $-20 \div -4 =$

5. $\frac{7}{7} =$

I. Dividing Monomials with Coefficients of One

Divide Monomials with Coefficients of 1: To divide monomials, keep the _____, _____ the exponents.

$$\frac{x^2}{x} =$$

$$\frac{a^7}{a^3} =$$

$$\frac{m^9}{m^7} =$$

The exponent for base x is _____

$$\frac{p^{10}}{p^5} =$$

$$\frac{s^{15}}{s^5} =$$

6. $\frac{t^{12}}{t^5} =$

7.

II. Dividing Monomials with Signed Number Coefficients

When the coefficients are signed numbers: Follow the rules of signed numbers to determine the coefficient of the answer.

$$\frac{6p^{14}}{2p^7} =$$

Keep the base
Subtract the exponents.

$$\frac{16y^{16}}{-4y^{11}} =$$

9.

8. $\frac{32d^{20}}{-4d^{14}} =$

III. Dividing Monomials with Larger Exponents in the Denominator

When the exponent in the denominator is larger than the exponent in the numerator, there are two options for writing the answer:

- 1 The exponent in the answer is _____, or
- 2 The base and exponent are left in the denominator with a _____ positive exponent.

$$\frac{6t^2}{3t^5} =$$

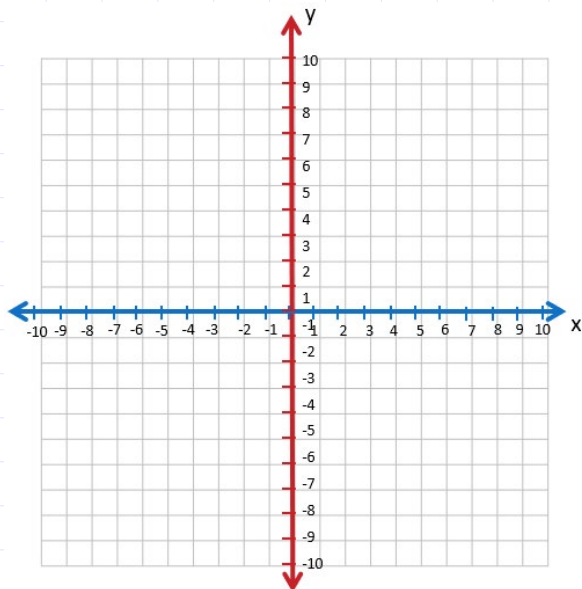
$$\frac{12y^6}{-4y^{13}} =$$

10. $\frac{-36w^{15}}{-4w^9} =$

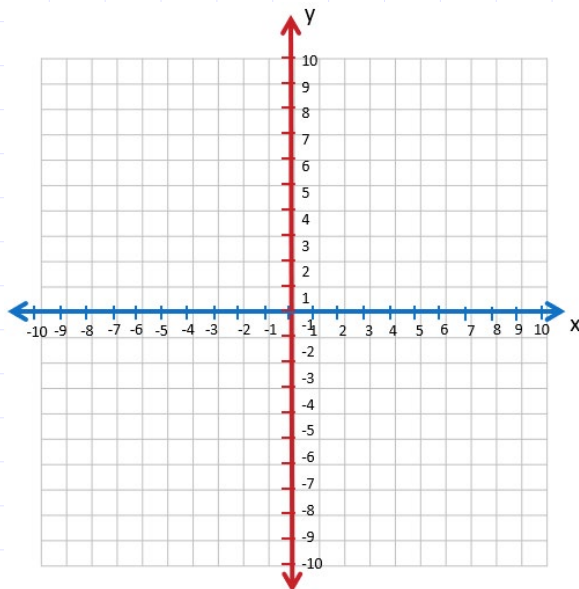
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IV. Practice

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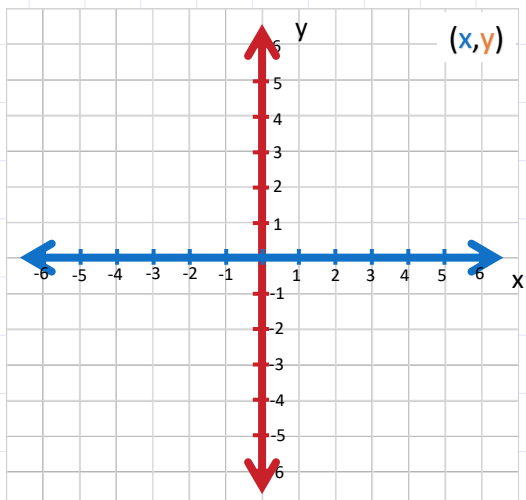
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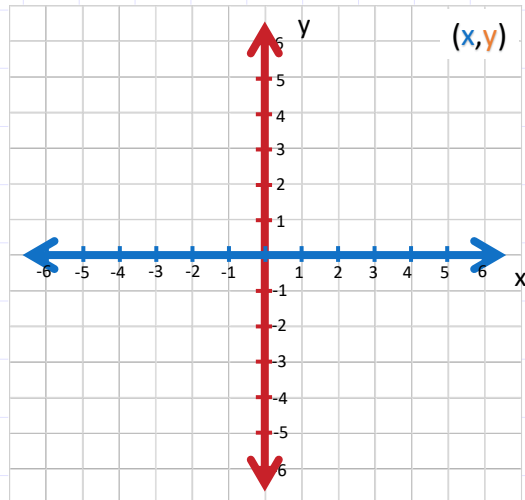
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Success Check # _____

Name:

Date:

I. Mystery Numbers

1. The sum of two numbers equals 29. The product of the numbers is 204. What are the two numbers?

2.

II. Percents

3. 3 out of every 11 chicken in the town are the breed Leghorn. Write this ratio as a percent.

4.

III. Fertilizing the Garden

5. Danielle has a circular garden with a diameter of 12 feet. She is using a new fertilizer. If she uses 2 teaspoons for every 10 square feet of garden, how much will Danielle need for her entire garden? Round to the nearest tenth.

6.

IV. Brick Work

7. Nathaniel can lay 16 bricks in one hour. Keith can lay 26 bricks in one hour. John can lay 43 bricks in one hour. About how long will it them to build a structure that uses 467 bricks?
Round the answer to the nearest half-hour. (1.5 means one and one-half hours)

8.

V. Percents

9. A local park has a picnic area with 25 square tables that can be pushed together to form one long table for a large group. Each square table can seat 6 people. How many people can be seated at the combined tables?

10.

VI. Fertilizing the Garden

11. The local museum is making a scale model of Happy Acres Town. The scale model is 1 inch = 4 feet. The Farm tower is 38 feet in Happy Acres Town. What is the height of the tower in the museum's model town?

12.

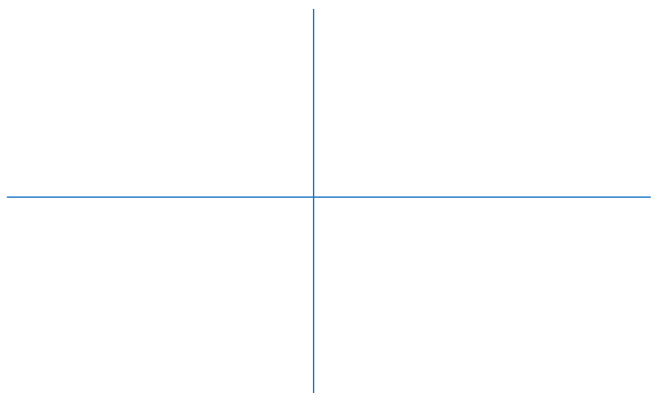
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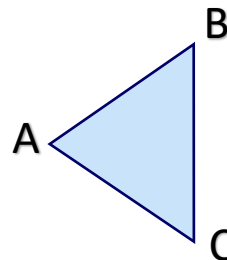
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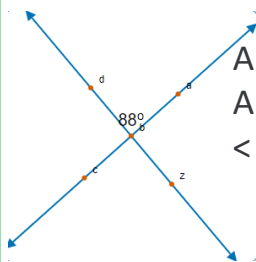
1. Draw and Identify each polygon



2. Given: Triangle ABC, $\angle B = 40$, $\angle C = 40$, and $\angle A = 100$. Classify the triangle. (The triangle may not be drawn to scale.)



3. Lines ac and dz intersect at point b. Angle abd = 88°

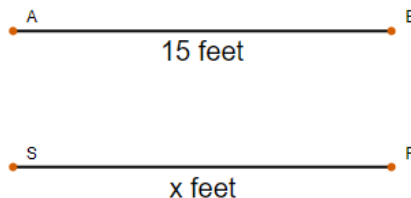


Angle abz = _____ $^\circ$

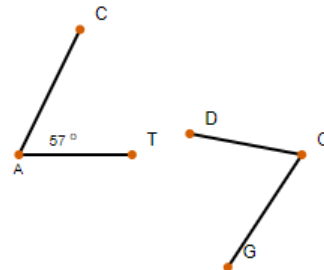
Angle cbz = _____ $^\circ$

$\angle abd \cong$ _____

4. Line segment AB is congruent to line segment SR. What is the length of SR?



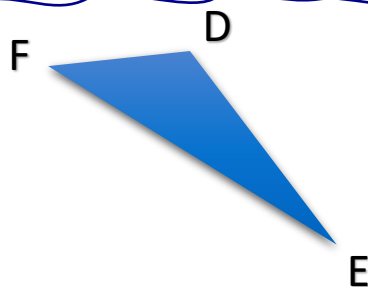
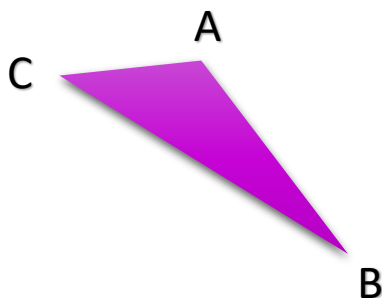
5. Angle CAT is congruent to angle DOG. What is the measure of DOG?



II. Congruent

congruent: _____ in measure.

The symbol for congruent is $\cong$. (On the computer some times it looks like $\equiv$)



$\triangle ABC \cong \triangle DEF$

$\angle A \cong \angle$ _____

$\angle B \cong \angle$ _____

$\angle C \cong \angle$ _____

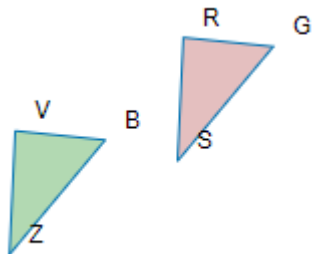
$AB \cong$ _____

$BC \cong$ _____

$CA \cong$ _____

Congruent Triangles: _____ sides
and _____ angles of congruent
triangles are congruent.

$$\triangle BVZ \cong \triangle GRS.$$



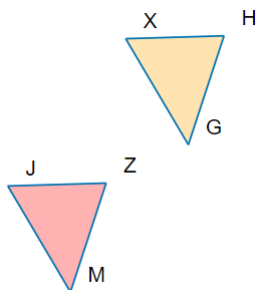
Determine the
corresponding angles of
the congruent triangles.

___ $\cong$ ___
___ $\cong$ ___
___ $\cong$ ___

Determine the
corresponding sides of the
congruent triangles.

___ $\cong$ ___
___ $\cong$ ___
___ $\cong$ ___

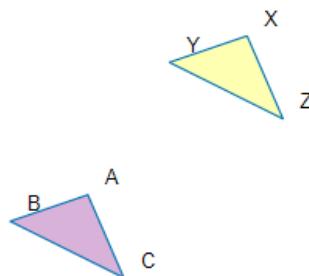
$$6. \triangle ZJM \cong \triangle HXG.$$



Determine the
corresponding angles of
the congruent triangles.

___ $\cong$ ___
___ $\cong$ ___
___ $\cong$ ___

$$7. \triangle ABC \cong \triangle XYZ.$$



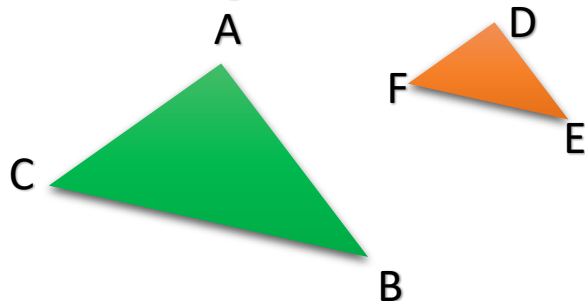
Determine the
corresponding sides of
the congruent triangles.

___ $\cong$ ___
___ $\cong$ ___
___ $\cong$ ___

8.

9.

II. Similar Triangles



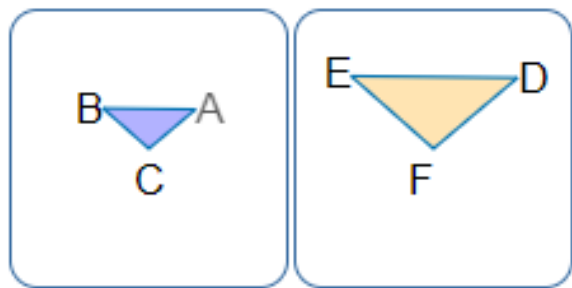
$$\triangle ABC \sim \triangle DEF$$

$$\begin{aligned} \angle A &\cong \angle ______ \\ \angle B &\cong \angle ______ \\ \angle C &\cong \angle ______ \end{aligned}$$

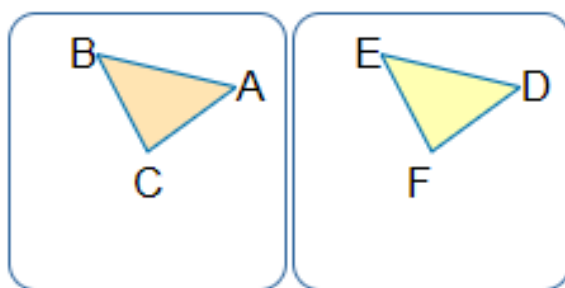
$$\begin{aligned} AB &= 8 \text{ feet} \\ BC &= 12 \text{ feet} \\ AC &= 6 \text{ feet} \\ DF &= 3 \text{ feet} \\ DE &= ______ \text{ feet} \\ EF &= ______ \text{ feet} \end{aligned}$$

Similar Triangles: The corresponding angles of similar triangles are _____ and corresponding sides are _____.
The symbol used for similar is $\sim$

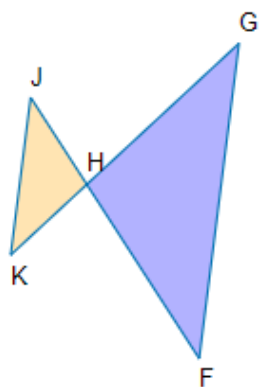
Are the triangles similar or congruent?



Are the triangles similar or congruent?



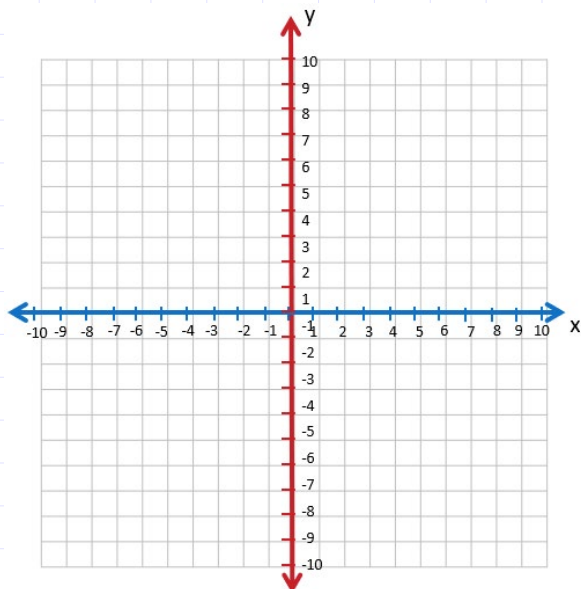
10. Determine if the triangles are similar or congruent, then give the definition of each.



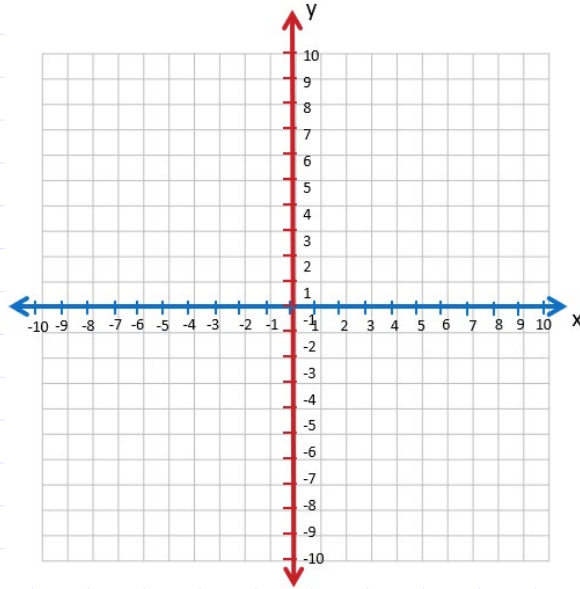
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IV. Practice

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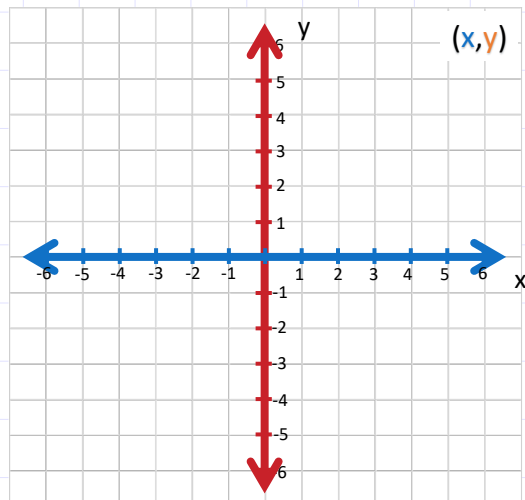
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Success Check # _____

Name:

Date:

Warmup:

1. $(5x^2)(3x^4)$

2. $(-3y^3)(-6y^7)$

3. $(-9t^2)(4t^8)$

4. $(10s^4)(-7s^6)$

5. $12 - 5(-2p - 3)$

6. $(3a + -6) + (8c + -12)$

7. $-(8m + 11)$

I. Multiplying Monomials and Binomials

Monomial: A polynomial with _____ term(s).

Examples of monomials include: _____

Binomial: A polynomial with _____ term(s).

Examples of binomials include: _____

$$6t^2 (2t^6 + 3t^7)$$

To multiply a monomial by a binomial:
Multiply the monomial by **each**
term of the binomial

Multiply the coefficients

Add the exponents.

$$7y^3(4y^5 + 2y^4)$$

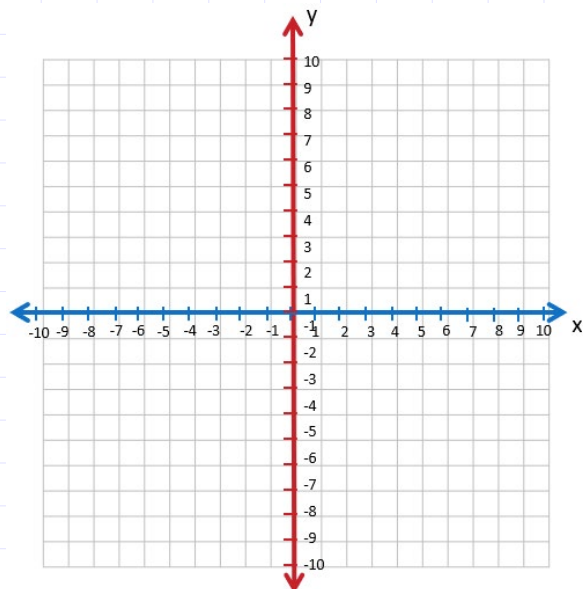
$$-3y(8y^2 + 7y^3)$$

8. $6c^5(4c^2 + 7c^7)$

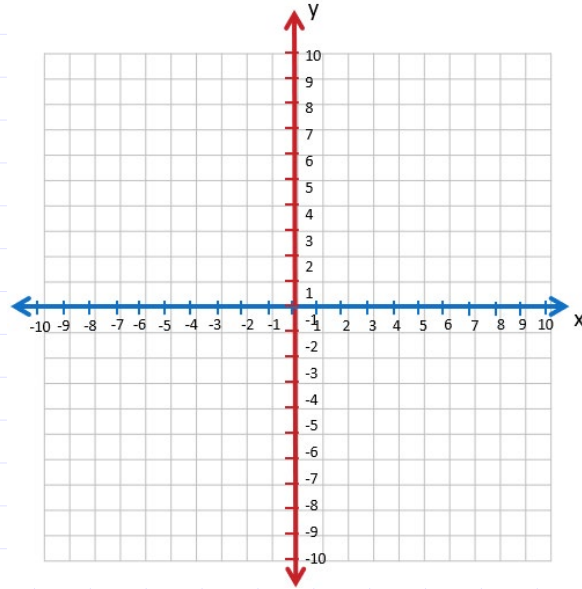
9. $5r(10r^2 + 3r^7)$

IV. Practice

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Success Check # _____

Name:

Date:

Name: _____

Attempt #: _____

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Name:

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