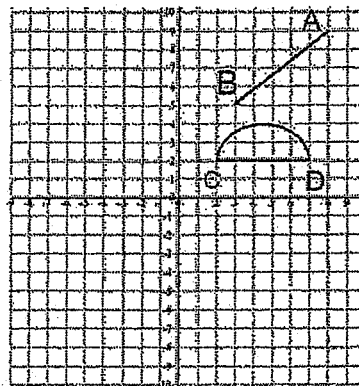
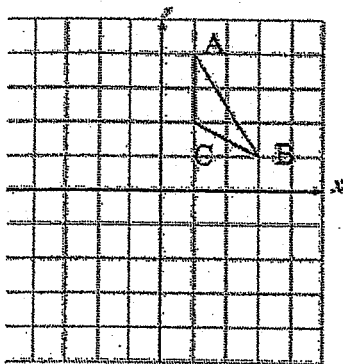
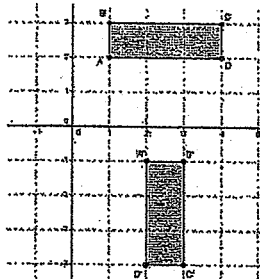


1. Name two real life examples where we see rotation, reflection, dilation or translation.

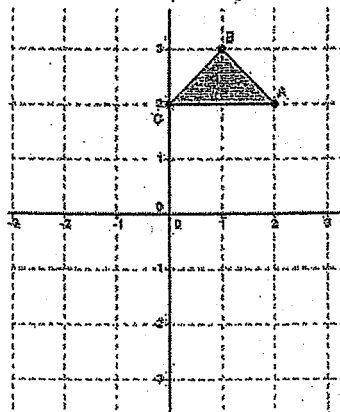
2. Rotate 180 degrees around the center 3. Translate image CD along vector ray AB



4. What rigid motion would show that $ABCD$ is congruent to $A'B'C'D'$ below?



5. Reflect $\triangle ABC$ over the x -axis. Label the new triangle's vertices A' , B' , and C' .



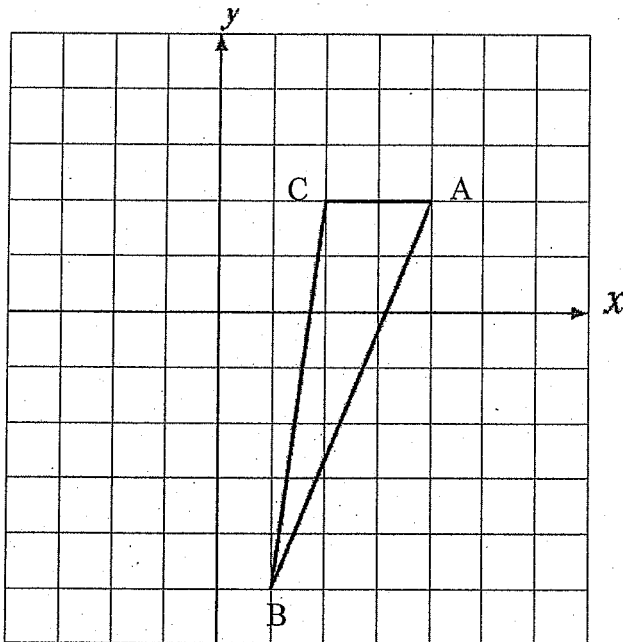
Math 8 Graded Review 2

Due: _____

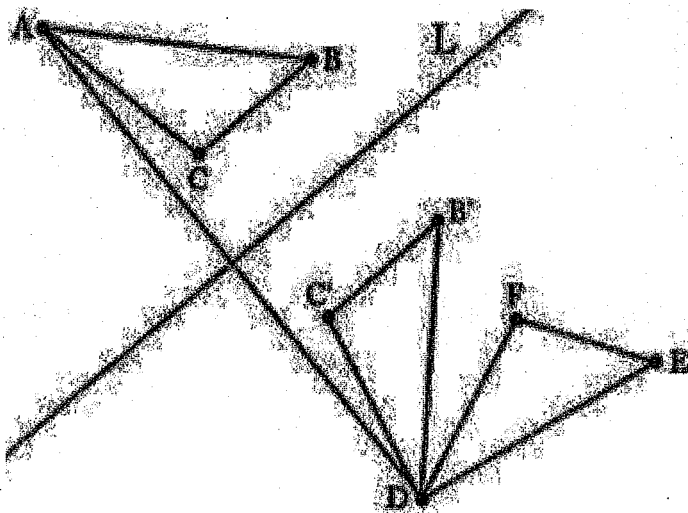
NAME: _____

Period: _____

1. Reflect triangle ABC over the x-axis.

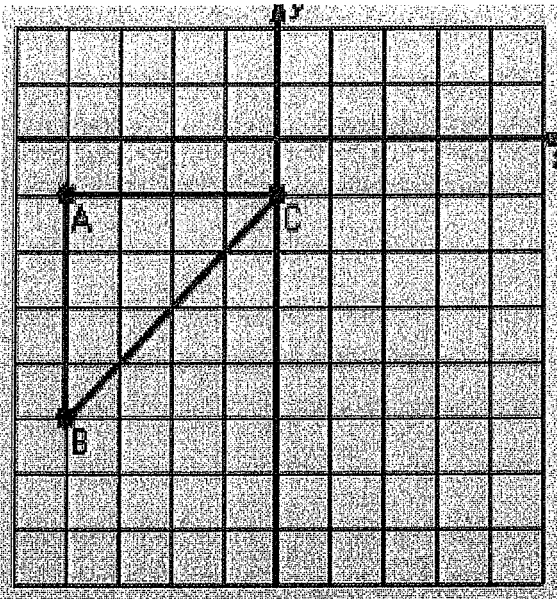


2. What rigid motion was used to move image ABC to D'B'C' and then D'B'C' to DFE.

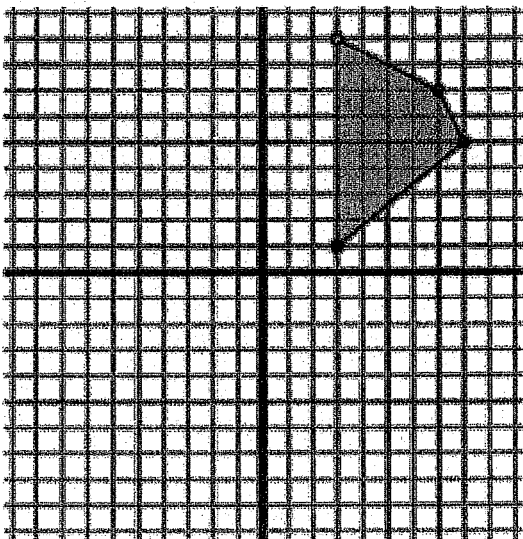


- a.) reflect, translate
- b.) translate, rotate
- c.) rotate, reflect
- d.) reflect, rotate

3. Rotate 90 degrees around the origin counterclockwise.
Translate (0, -2)



4. Reflect over $x = 2$



5. What are the coordinates of A (2, -3), B (4, 8) and C (-3, 5) after they are rotated 180 degrees?

A' (,)

B' (,)

C' (,)

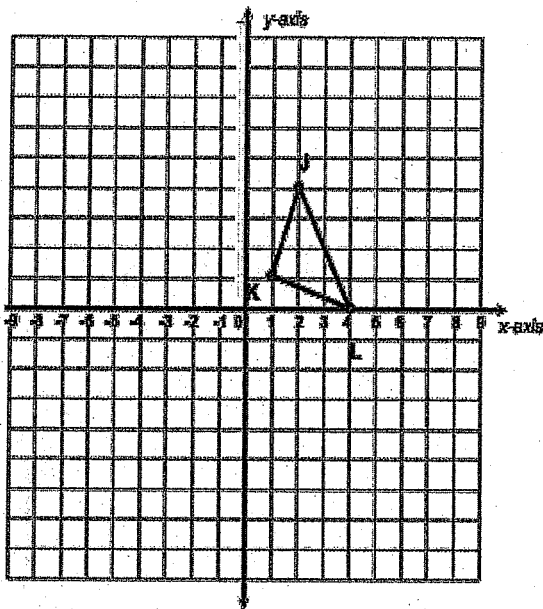
Graded Review 3

Due _____

NAME _____

Period _____

1.



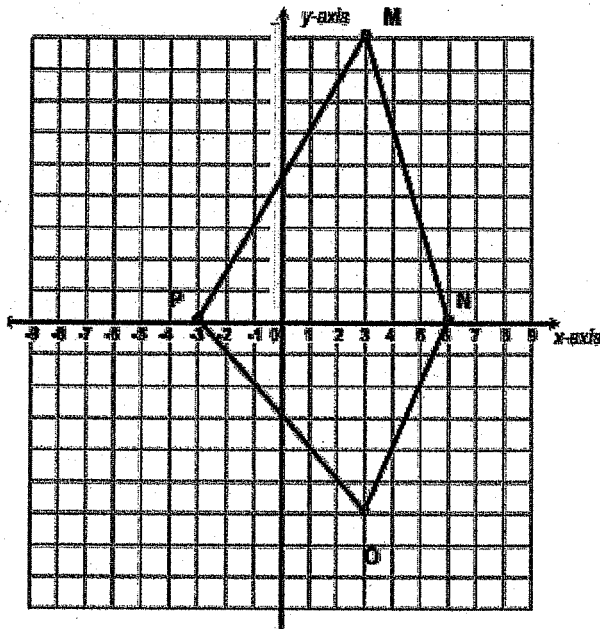
Graph the dilated image of triangle JKL using a scale factor of 2 and (0,0) as the center of dilation.

J: _____ J': _____

K: _____ K': _____

L: _____ L': _____

2.



Graph the dilated image of quadrilateral MNOP using a scale factor of $\frac{1}{3}$ and the origin as the center of dilation.

M: _____ M': _____

N: _____ N': _____

O: _____ O': _____

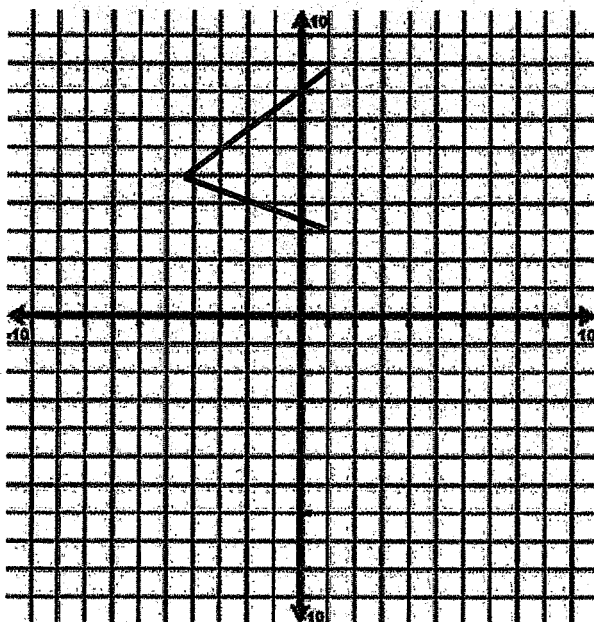
P: _____ P': _____

3. If the measure of $|OP| = 10$ and $|OP'| = 30$, what is the scale factor used in this dilation?

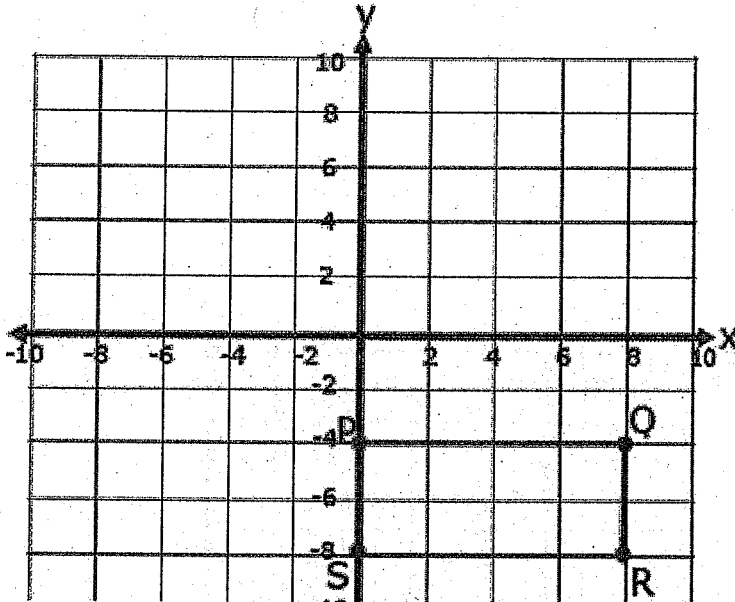
4. What transformation is the only transformation that changes the lengths of the segments?

- A) Rotation
- B) Dilation
- C) Reflection
- D) Translation

5. Translate triangle ABC (6, -2) then reflect that image over the x-axis



1. Graph the image of rectangle PQRS after a dilation with a scale factor of $\frac{1}{2}$, centered at the origin. Then translate PQRS by $(-4, 6)$. HINT: Be careful the scale goes by 2!!



2. State the coordinates of rectangle ABCD after a dilation of 3 (primes) and rotation 180 degrees (double primes). $A(2, 0)$, $B(-3, 5)$, $C(-1, 4)$, $D(-2, 3)$

$A'(\quad , \quad)$

$A''(\quad , \quad)$

$B'(\quad , \quad)$

$B''(\quad , \quad)$

$C'(\quad , \quad)$

$C''(\quad , \quad)$

$D'(\quad , \quad)$

$D''(\quad , \quad)$

3. Determine the scale factor used to dilate $A(-2, 3)$ to $A'(-6, 9)$.

a. 4

b. -4

c. 3

d. -3

4. Given the scale factor $r = 1/3$, determine the length to OP given that $OP' = 9$.

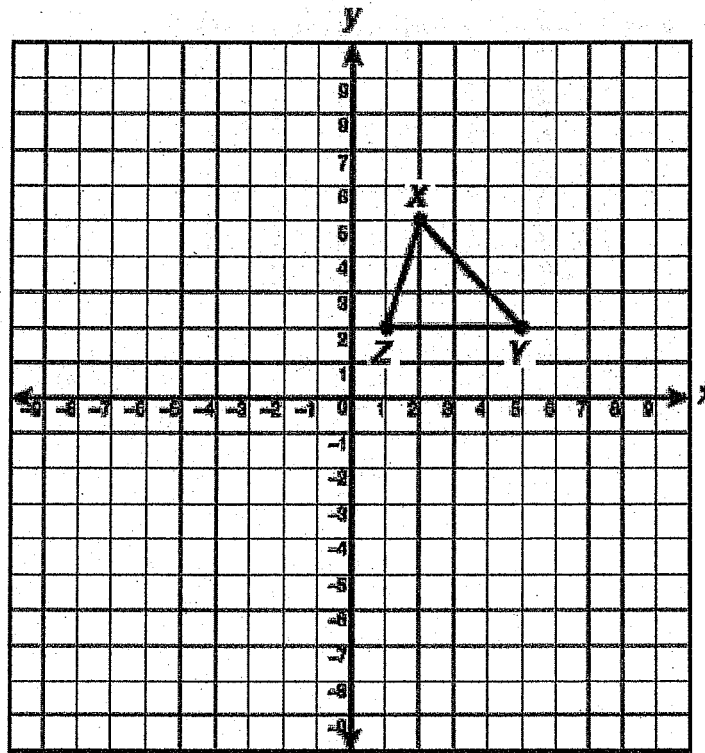
a. 3

b. 27

c. -3

d. 12

5. Dilate triangle xyz by the scale factor of 2 through the origin.

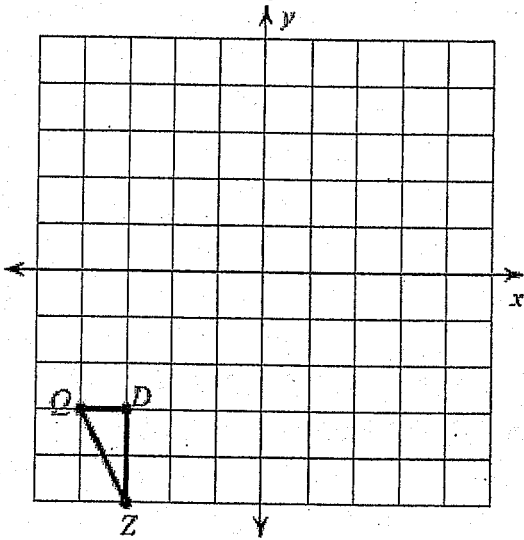


1. Point A (-15, 9) is dilated by the scale factor of $\frac{1}{3}$, What is the coordinates of A'?

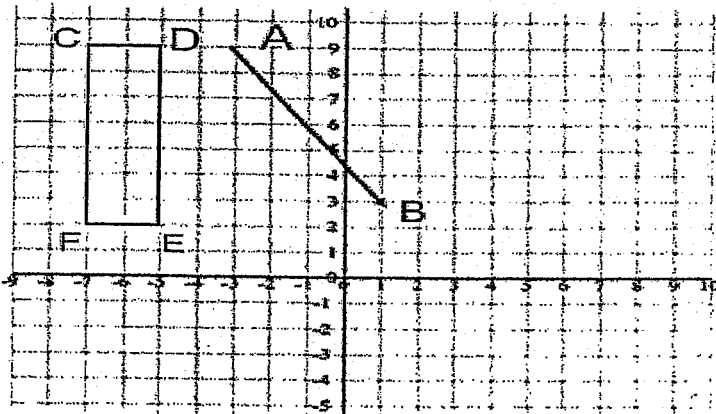
- A. (-45, 27)
- B. (-5, 3)
- C. (45, 27)
- D. (5, 3)

2.

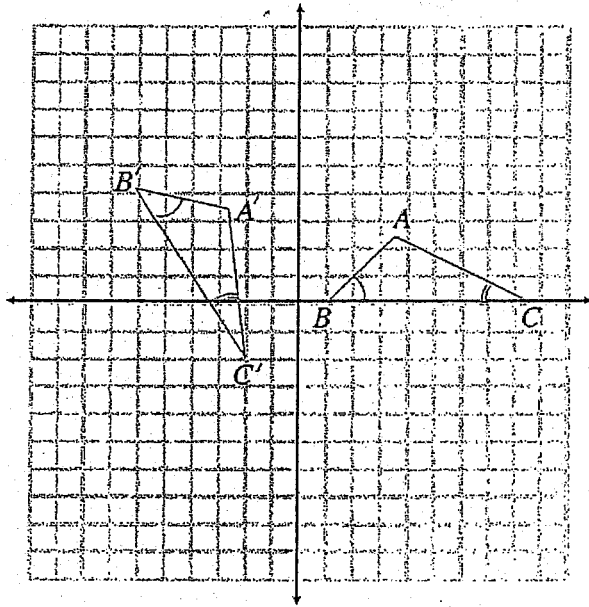
reflection across $y = -1$



3. Translate image CDEF by the vector ray AB and label the new image.

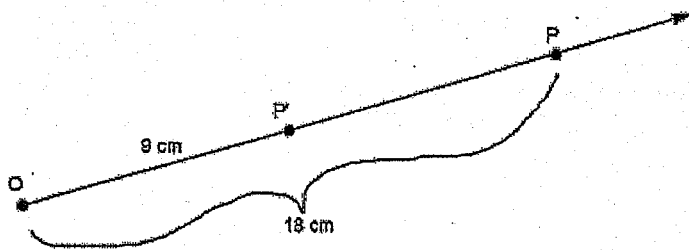


4. Describe the sequence of rigid motions that maps triangle ABC to A'B'C' (BE SPECIFIC).



5.

Use the diagram below. Let there be a dilation from center O . Then $dilation(P)=P'$. In the diagram below, $|OP|=18$ cm and $|OP'|=9$ cm. What is the scale factor r ? Show your work.

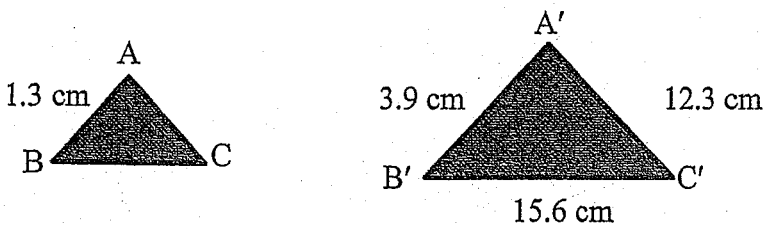


- A. 2
- B. $\frac{1}{3}$
- C. 3
- D. $\frac{1}{2}$

1.) Given that $|OP| = 16$ and $|OP'| = 4$. Determine the Scale Factor.

- a) $r = 2$
- b) $r = \frac{1}{2}$
- c) $r = 4$
- d) $r = \frac{1}{4}$

2.) Figure 1:



a.) Find the length of AC given the information provided in Figure 1. Show your work to receive full credit.

b.) Find the length of BC given the information provided in Figure 1. Show your work to receive full credit.

3.) Which symbol represents congruent?

- a) $=$
- b) \neq
- c) \cong
- d) \sim

4.) Which symbol represents similar?

- a) $=$
- b) \neq
- c) \cong
- d) \sim

Graded Review 7

Due _____

Name _____

Date _____ Period _____

Simplify completely

1. 2^3

2. $\frac{4^{15}}{4^8} =$

3. $a^7 \cdot a^{12} =$

4. $5^2 \cdot \frac{1}{5^2}$

5. Arnie wrote:

$$(-3.1) \times \cdots \times (-3.1) = -3.1^4$$

4 times

Is Arnie correct in his notation? Explain why or why not?

Math 8/Graded Review 8

Due: _____

Name: _____

Period: _____

Directions: Simplify completely

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

2. $3^{-4} =$

3. $\frac{x^3}{x^5} =$

4. $(-2.543667)^0 =$

5. $3^{10} \div 3^8 =$

Graded Review 9

Due _____

Name _____

Period _____ DATE _____

1. Simplify in scientific notation

$$(5.25 \times 10^8) + (1.38 \times 10^5)$$

2. Simplify in scientific notation

$$\frac{55.123 \times 10^8}{5 \times 10^5}$$

3. Multiply $(6.38 \times 10^{18}) \cdot (2.82 \times 10^{-5})$

4. What is 5.87×10^{-4} in standard form?

5. The wavelength of the color red is about 6.5×10^{-9} meters. The wavelength of the color blue is about 4.75×10^{-9} meters. Show or explain that the wavelength of red is longer than the wavelength of blue.

Math 8-Graded Review #10

Due: _____

Name: _____

Period: _____

Directions: Solve the following and write the answer using scientific notation.

1.) $(9.7 \times 10^8)(3.2 \times 10^6) =$

2.) $(8.5 \times 10^5) \div (2.1 \times 10^2) =$

3.) $(7.5 \times 10^8) - (4.1 \times 10^6) =$

4.) $(2.5 \times 10^4) + (3.8 \times 10^5) =$

5.) The body of an average person contains 2.3×10^{-4} lb of copper. How much copper is contained in the bodies of 1200 people?

1. The point $p(-5,2)$ is rotated 180 degrees. What is the new point p' ?

- A) $(-5,-2)$
- B) $(5,-2)$
- C) $(2,-5)$
- D) $(-2,5)$

Explain why you choose your answer:

2. Change 5.36×10^{-4} to scientific notation

- A) 5360000
- B) 53600
- C) 0.000536
- D) 0.0000536

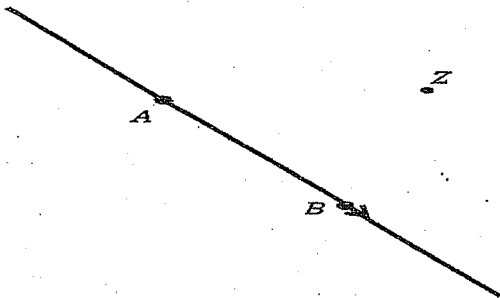
Explain why you choose your answer:

3. Multiply $(4 \times 10^8)(2 \times 10^4)$

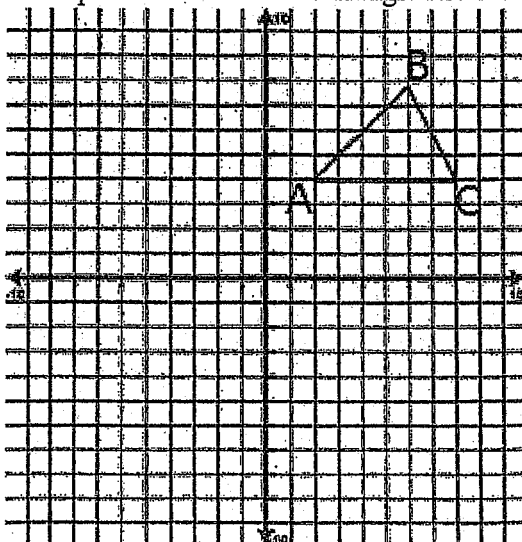
- A) 8×10^4
- B) 8×10^{32}
- C) 4×10^{12}
- D) 8×10^{12}

Explain why you choose your answer:

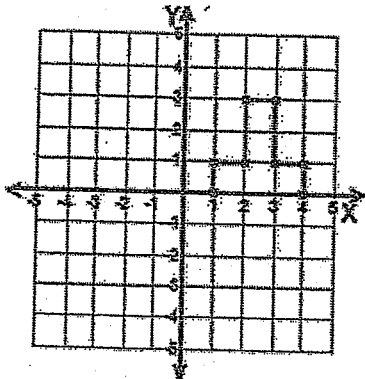
4. Translate point Z along vector AB . What do you know about the line containing vector AB and the line formed when you connect Z to its image Z' ?



5. Graph the reflection of triangle ABC over the x-axis

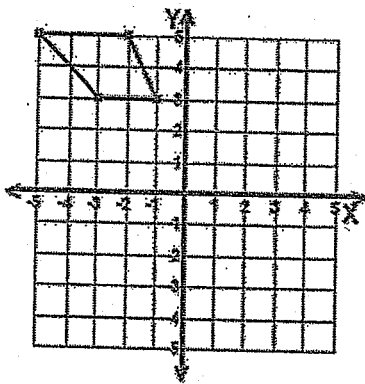


1. Translation: 5 left and 5 down



- 2.

Rotation: 90° ccw about the origin



3. Write the following numbers in scientific notation given the standard form.

a. 234700000

b. 0.000000000157

4. Solve: $\frac{3^7 \times 5^4}{3^5 \times 5^6} =$

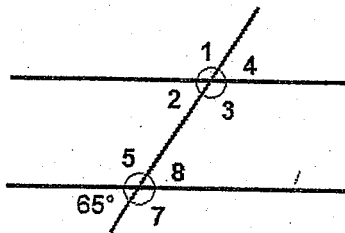
1. Given the length of segment $AB = 12.8$ cm. What is the length of $A'B'$ after a dilation with a scale factor of $\frac{1}{4}$?

- A) 51.2 cm
- B) 8.8 cm
- C) 3.2 cm
- D) 6.4 cm

2. Simplify the following: $(x^2yz^4)^3$

- A) $x^6y^3z^{12}$
- B) $x^5y^4z^7$
- C) x^2yz^4
- D) x^6yz^{12}

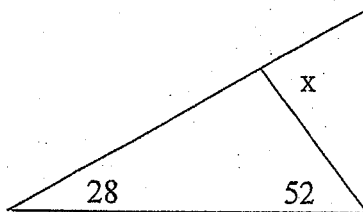
3. Find all the missing angles



- <1 _____
- <2 _____
- <3 _____
- <4 _____
- <5 _____
- <6 _____
- <7 _____

4. Divide and put in proper scientific notation $\frac{155 \times 10^7}{5 \times 10^4}$

5. Find the measure of angle x



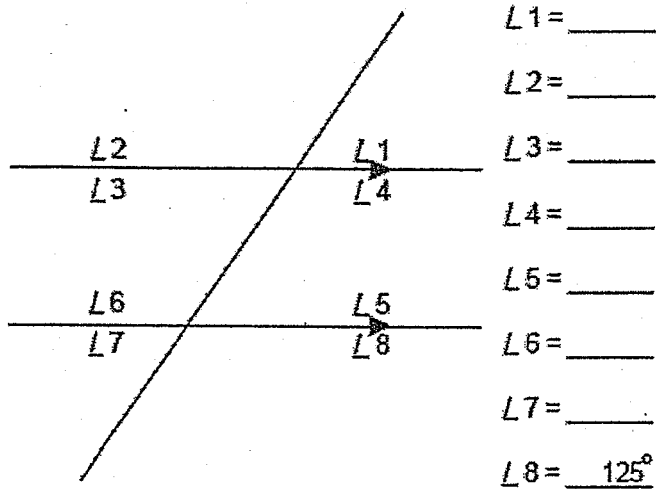
Graded Review 14

Due _____

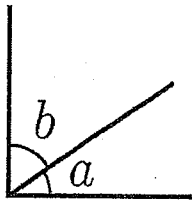
Name: _____

Date _____ Period: _____

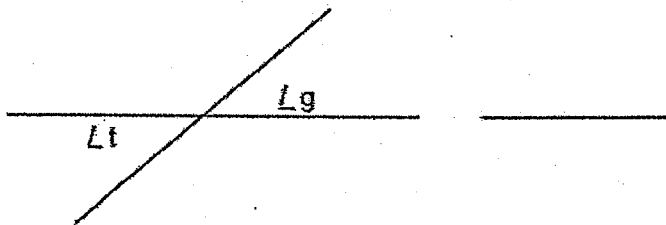
1. Find the missing angles below.



2. Name the angle relationship for angle b and a.



3. Name the angle relationship for angle t and g.



4. Which of the following angles do not form congruent angles?

- a. vertical
- b. supplementary
- c. corresponding
- d. Alternate Interior

5. What is a remote interior angle and how can you use it to find an exterior angle?

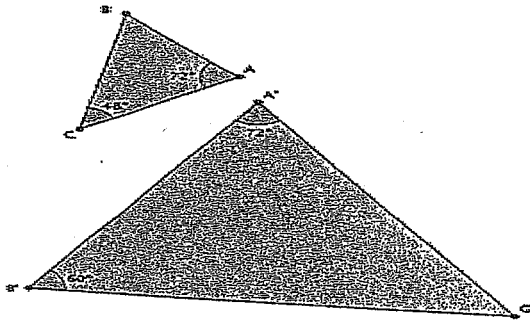
Graded Review 15
DUE _____

Name _____
Date _____ Period _____

1. Translate the expression and determine if it is linear or nonlinear (explain how you know)

The square of a number subtracted from ten

2. Are the two triangles below similar? Explain/prove your answer.



3. What is the solution to the equation $3x + 5 = 17$?

- A) -4
- B) 7
- C) 4
- D) 17

4. What transformation is the only transformation that changes the lengths of the segments?

- A) Rotation
- B) Dilation
- C) Reflection
- D) Translation

5. Simplify in proper scientific notation $(5.2 \times 10^8)(4.5 \times 10^5)$

Graded Review 16

Due _____

Name: _____

Date: _____ Period: _____

1. Is $x = 3$ a solution to $3x + 5 - 8x = 2x + 5$

2. How many solutions does the equation $3(x + 2) = 3x + 6$ have?

a. one

b. two

c. None

d. infinitely many

3. Simplify the power of a power $(2x^5y^6)^3$

4. Find the value of x . $7x - 8 + 5x = 2x - 28$

5. Solve: $(3.2 \times 10^5) - (1.23 \times 10^4)$ HINT USE TABLE OR CONVERT FIRST
Put answer in scientific notation

Graded Review 17
DUE _____

NAME _____
Date _____ Period _____

1. Solve the equation for y= form

$$2y - 4x = -6$$

2. Make a table for the equation in number 1

x	y=	y
0		
1		
2		

3. Find the slope of the points (5,1) and (-4,3). MUST SHOW YOUR WORK!

A) $\frac{9}{-2}$

B) -2

C) $\frac{-2}{9}$

D) 2

4. Solve for x

$$4x + 2 = x - 4$$

5. Convert 7.25×10^{-5} to standard form

A) 0.00000725

B) 0.0000725

C) -0.0000725

D) 725000

Graded Review 18

Due _____

Name: _____

Date: _____ Period: _____

1.) Solve for x:

$$2x + 15 = 3(x - 2)$$

2.) Combine like terms:

$$3x^2 + 4x - 5 = 12x^2 + 8x - 3x + 18$$

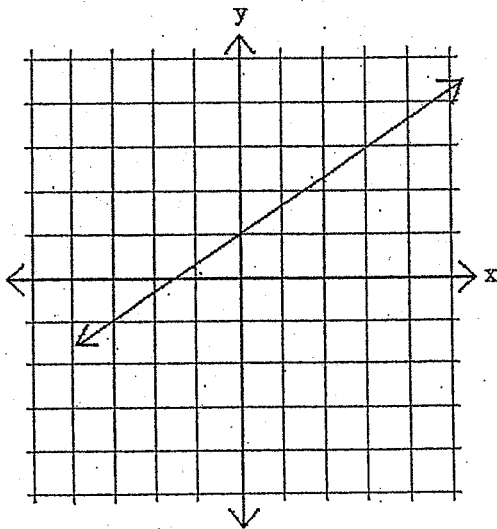
3.) Find the y intercept and slope for the following equation.

$$x - 2y = 3x + 10$$

Slope: _____

y-intercept: _____

4.) Find the equation of the line using the graph below:



5.) Find the slope the of line given the points A(2, 3) and B (-4, 6).

Each question is worth 1 point.

1. The solution to $\frac{x}{3} = \frac{x-1}{5}$ is which of the following?

a. $-\frac{3}{2}$

c. $-\frac{1}{2}$

b. $\frac{3}{2}$

d. $\frac{1}{2}$

2. What is $3^2 \cdot 9 \cdot 3^3$ equivalent to?

a. 81^5

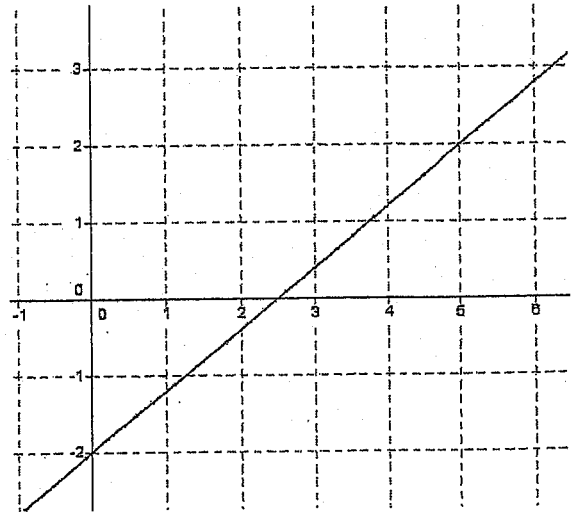
c. 3^6

b. 81^6

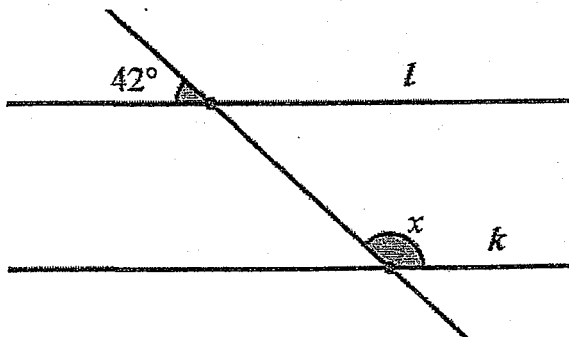
d. 3^7

3. Solve the equation $4x - 6 = 4 + 2x$

4. Determine the equation of the line graphed at right.



5. Line l and line k are parallel lines. What is the value of angle x ?



Graded Review 20
Date _____

Name: _____
Period: _____ Date: _____

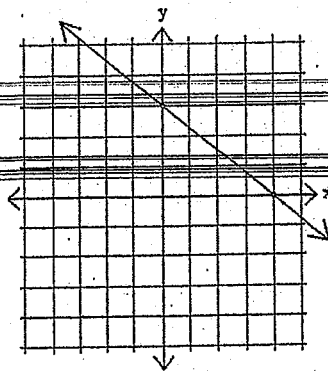
1. Find the equation of the line in the graph provided.

a. $y = 3x + 1$

b. $y = \frac{3}{4}x + 3$

c. $y = -\frac{3}{4}x + 3$

d. $y = \frac{3}{4}x - 3$



2. Find the slope given points (-2, 3) and (5, 8).

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

b. $-\frac{5}{7}$

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

d. $-\frac{7}{5}$

3. Find the solution to the following equations using substitution.

$$y = 2x - 10$$

$$2y = 16 - 14x$$

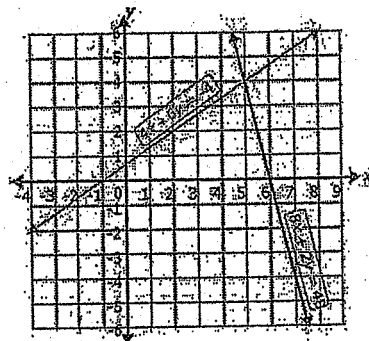
4. Find the solution to the following equations using elimination. (leave as fraction)

$$3x - 5y = 17$$

$$6x + 5y = 10$$

5. Find the solution to the two graphed lines.

(,)



Graded Review 21

Due Date _____

Name _____

Date _____

Period _____

1. The point $A(2, -1)$ is rotated 180 degrees about the origin. What are the coordinates of the new point A' ?

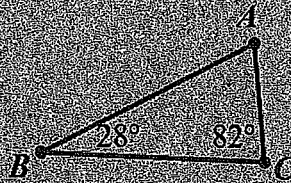
a. $(-2, -1)$

c. $(2, -1)$

b. $(-2, 1)$

d. $(2, 1)$

2. What is the measure of $\angle CAB$ in $\triangle ABC$ below?



a. 70°

c. 80°

b. 60°

d. 28°

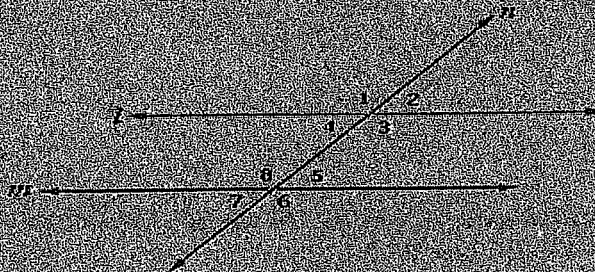
3. Multiply and change to scientific notation: $(2 \times 10^2)(6 \times 10^3)$

4. Solve the system of equations algebraically.

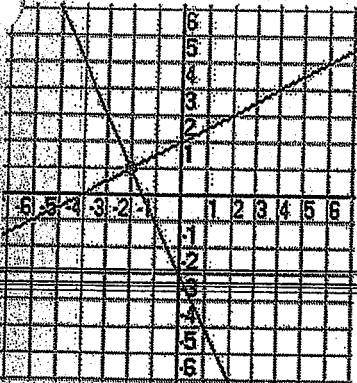
$$4x - 7y = 5$$

$$9x - 7y = -15$$

5. Identify a set of corresponding angles in the diagram below.



1. Find the solution to the system of equations below.

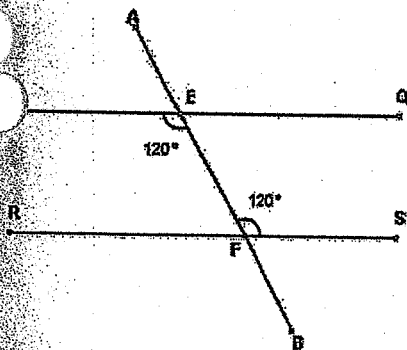


- A. (2, 1)
- B. (-2, -1)
- C. (-2, 1)
- D. (1, -2)

2. Solve for x. $2(x + 3) = 5x - 6$

- A. -4
- B. 4
- C. 5
- D. 1

3. Use the picture below to identify the angle relationship.



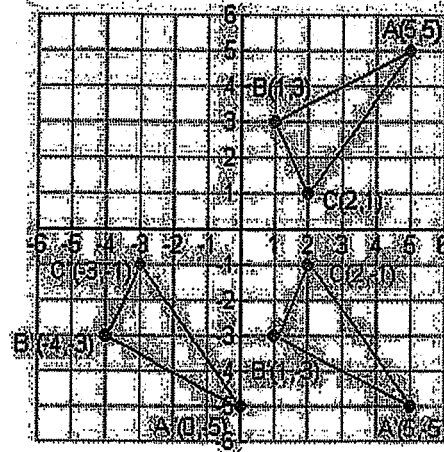
- A. Corresponding
- B. Alternate Exterior
- C. Vertical
- D. Alternate Interior

4. Write your answer in scientific notation.

$(2.5 \times 10^7)(3.4 \times 10^3) =$

5. Which of the following descriptions (pertaining to the graph at the right) is true?

- [1] $\Delta A''B''C''$ is a translation of ΔABC
- [2] $\Delta A''B''C''$ is a glide reflection of ΔABC
- [3] $\Delta A''B''C''$ is a reflection in the origin of ΔABC
- [4] $\Delta A''B''C''$ is a dilation scale factor 2 of ΔABC



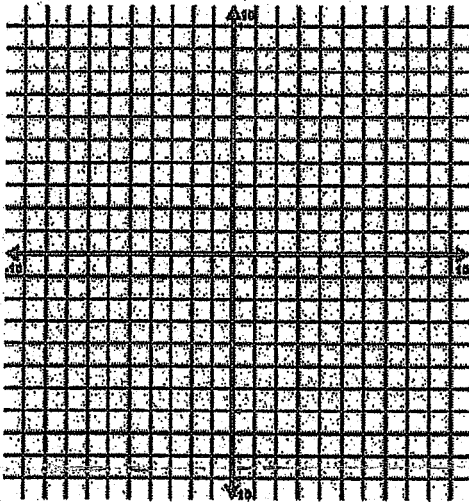
1. Solve the equation $2y + 8 = -4x$ for $y = Mx + b$ form

2. State the slope and y intercept of the equation in question #1 ($2y + 8 = -4x$)

Slope _____

Y-intercept _____

3. Graph the equation in #1 ($2y + 8 = -4x$)



4. Determine if the following relation is a function: $\{(1,4), (-6, 4), (8, 0), (1, -1)\}$. Explain why or why not.

5. Simplify $(5x^4y^3)^2$

A) $5x^8y^6$

B) $25x^8y^6$

C) $5x^6y^5$

D) $25x^6y^5$

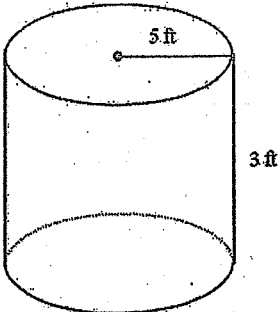
Graded Review 24

Due _____

Name: _____

Date: _____ Period: _____

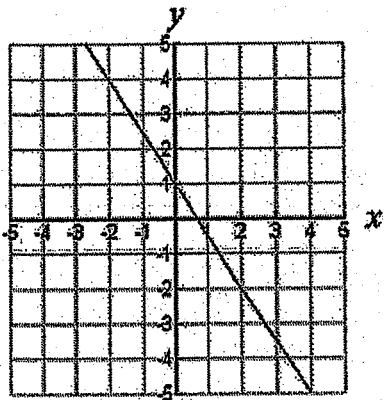
Find the volume of the cylinder to the nearest cubic foot. Use a calculator.



- a. 236 ft^3 b. 942 ft^3 c. 75 ft^3 d. 251 ft^3

2. $(2.3 \times 10^5) - (1.8 \times 10^4) =$

- A. $.5 \times 10^1$ B. 5 C. 2.12×10^5 D. 2.48×10^5



A. $y = -\frac{2}{3}x + 1$

B. $y = -\frac{3}{2}x + 1$

C. $y = \frac{2}{3}x - 1$

D. $y = \frac{3}{2}x + 1$

4. Find the rate of change and initial value given the table below.

x	f(x)
0	5
3	26

Rate of Change: _____

Initial Value: _____

5. Find the value of x. $5(x + 2) = 3x + 18$

Each question is worth 1 point.

1. The point $P(2, -1)$ is dilated from the origin by a scale factor of $r = 3$. What are the new coordinates of the dilated point, P' ?

- a. $(4, -2)$ c. $(6, -3)$
b. $(-4, 2)$ d. $(-6, 3)$

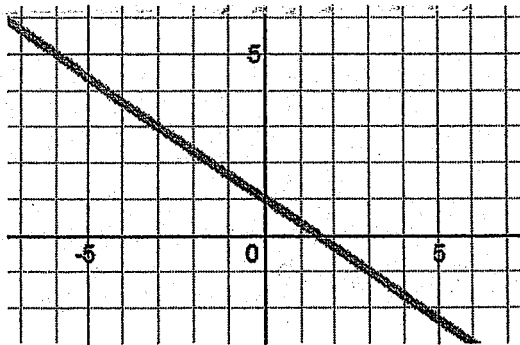
2. What is the slope of the line $2x + 3y = 6$?

- a. 3 c. 2
b. $-\frac{2}{3}$ d. $\frac{2}{3}$

3. Is the following relationship linear? Explain why or why not.

x	2	4	6	8	10
y	4	1	0	1	4

4. Determine the function rule for the graphed function below.



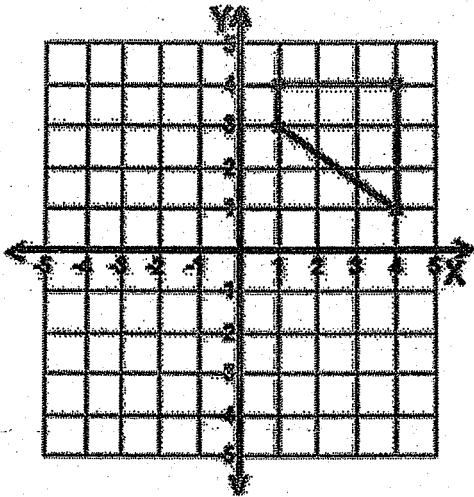
5. Which has a greater volume: a sphere of radius 3 in or a cylinder of radius 3 in and height 3.5 in? Show all work and explain your answer.

1. Solve the following and write the answer in scientific notation
(hint: table or convert)

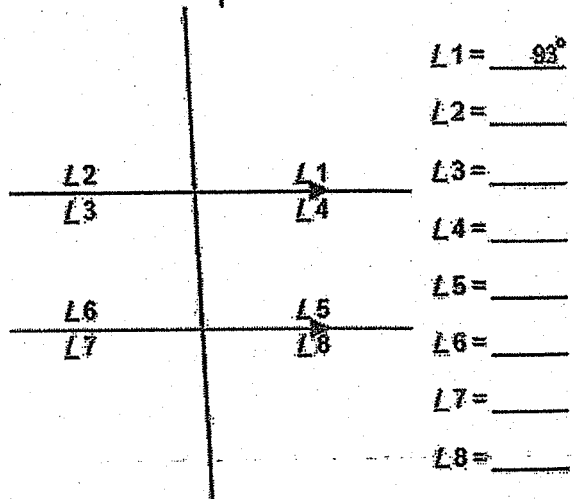
$$(2 \times 10^8) + (4.3 \times 10^7) =$$

2.

Rotation: 90° ccw about the origin



3. Find all missing angles



4. Solve for x:

$$2(x + 3) = 4x + 2$$

5. Find the total volume of a sphere connected to a cone with a height of 5 and a diameter of 6.

Each question is worth 1 point.

1. What is $\frac{4 \times 10^6}{8 \times 10^4}$ simplified in scientific notation?

a. 5×10^2

c. 2×10^2

b. 5×10^1

d. 2×10^{10}

2. Solve $7.9x + 3.675 = 3x - 11.025$ for x .

a. No solutions

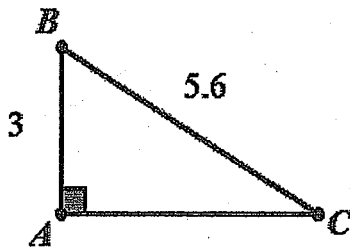
c. -3

b. Infinite solutions

d. 3

3. A line of the form $y = mx + b$ has a slope of 2 and goes through the point (4,2). What is the y -intercept of the line?

4. Find the length of the missing side of the triangle below. Round your answer to the nearest tenth.



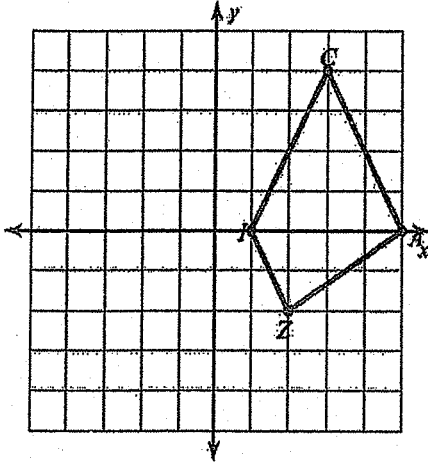
5. Which function below has a greater rate of change? Explain your answer.

$$f(x) = \frac{5}{2}x - 3$$

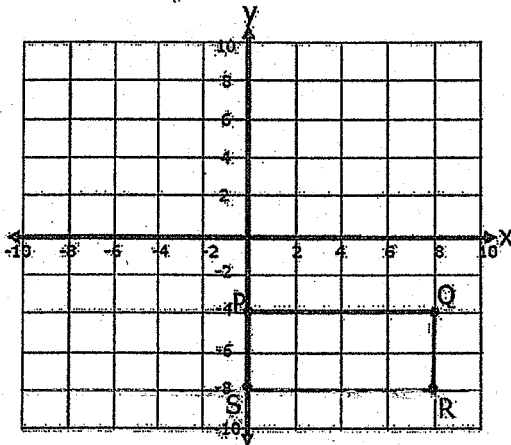
x	-1	1	3	5
$g(x)$	1	5	9	13

1.

reflection across the y-axis



2. Graph the image of rectangle PQRS after a dilation with a scale factor of $\frac{1}{4}$, centered at the origin.



3. Do side lengths 5, 12 and 14 make a right triangle?

4. Solve for n

$$30 = -5(6n + 6)$$

5. Which of the following do not have two angles that are congruent?

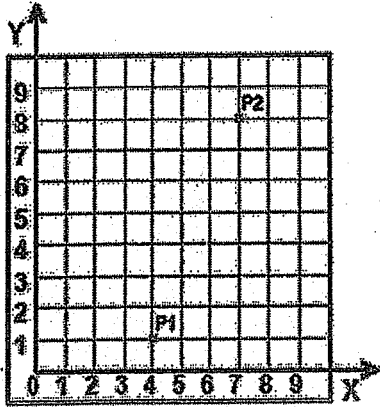
a. Supplementary

b. Vertical

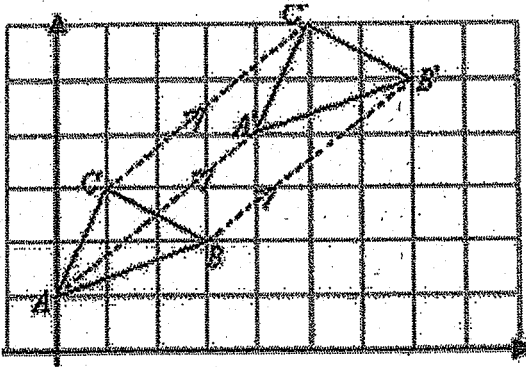
c. Corresponding

d. Alternate interior

1. Find the distance between the two points below.



2. Determine the point used to translate the image below.



3. Solve for n:

$$75 = 3(-6n - 5)$$

4. Arrange the following numbers in order from smallest to greatest

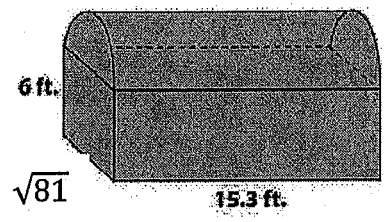
$$-1.2 \times 10^8, 2.45 \times 10^{-3}, 3.4 \times 10^8, 4.8 \times 10^{-7}$$

5. Estimate $\sqrt{89}$. Show your work to receive full credit. No Calculator for this one!

Graded Review 31
Due _____

Name _____
Date _____ Period _____

1. Find the volume of the solid below. Round to the nearest tenth.
Volume of a rectangle = $L \times W \times H$ and volume of half a cylinder $\frac{1}{2} \pi r^2 h$

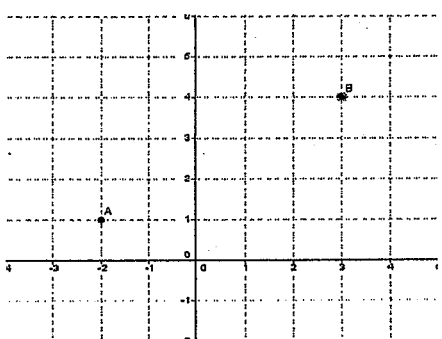


2. Simplify the square root as much as possible

$$\sqrt{128}$$

3. Solve the equation: $8x^2 - 7 = 193$

4. Find the distance between the two points below:



5. Find the missing leg of the right triangle. Round to the nearest tenth.

