

August 13, 2018

$(x, y) \rightarrow (-y, x)$

rotation 90° counterclockwise about the origin

Where are the points

$R(1,5) \rightarrow R'(-5,1)$   
 $S(2,2) \rightarrow S'(-2,2)$   
 $L(5,0) \rightarrow L'(-0,5)$

Aug 13-7:39 AM

### Even, Odd, or Neither

$f(x) = x^2 + 6$	$f(x) = x^3 - 8x$	$f(x) = x^4 + 3x^2$
$f(-x) = f(x)$ <b>Even</b>	$f(-x) = -f(x)$ <b>Odd</b>	$f(-x) \neq -f(x)$ <b>Neither</b>
Graph is symmetric with respect to the y-axis	Graph has origin symmetry	Graph is not symmetric with respect to the y-axis and does not have origin symmetry

Aug 13-8:02 AM

### Compare

$f(x) = 4x^2 - 7x^4$ ; **Even Function**

$g(x) = 5x^3 - 2x^5$ ; **Odd Function**

$h(x) = 7x^2 + 5x^3 + 3x^4$ ; **Neither**

even    odd    even

Even	Odd	Neither
Graph is symmetric with respect to the y-axis	Graph has origin symmetry (if we rotate half the graph about the origin, it fits perfectly over the other half)	Graph is not symmetric with respect to the y-axis and does not have origin symmetry

Aug 13-8:03 AM

Determine whether the following functions are even, odd, or neither.

1. $f(x) = 4x^3 - 3x^5$ <b>Neither</b>	2. $f(x) =  x  + 1$ <b>even</b>	3. $f(x) = -x^2 - 4x^4$ <b>even</b>
4. $f(x) = \frac{1}{3}x^3$ <b>odd</b>	5. $f(x) = 7x^7$ <b>odd</b>	6. $f(x) = \sqrt{x+5}$ <b>Neither</b>

Aug 13-7:48 AM

7. $f(x) = 3x^2$ <b>even</b>	8. $f(x) = x^2 - 2x^3$ <b>NEITHER</b>	9. $f(x) = 3x^4 + 4x^0$ <b>NEITHER</b>
10. $f(x) = x^2 - 5x^3$ <b>even</b>	11. $f(x) = 10x^4 + 5x^5$ <b>NEITHER</b>	12. $f(x) = 2(x+1)^3$ <del>NEITHER</del>

Aug 13-7:48 AM

key: 1) N 2) N 3) E 4) O 5) O 6) N 7) E 8) N 9) N  
 10) E 11) N 12) N

Aug 13-7:48 AM

Geometry Unit 1 Study Guide  
Show all work

1. (G.CO.5) Which clockwise rotation about point P maps C to B?  
**90° CW**

2. (G.CO.2) Which describes how  $\triangle ABC$  could be rotated to form its image  $\triangle A'B'C'$ ?  
**90° CCW**  
**CW = counterclockwise**

3. (G.CO.4) When the point  $(-3, 2)$  is reflected across the x-axis, what is the resulting image?  
 **$(-3, -2)$**

4. (G.CO.4) What is the image of  $(-3, 2)$  when it is translated by  $(x-1, y-4)$  and then reflected about the y-axis?  
 **$(4, 2)$**   
 **$(-3 - 1, 2 - 4) = (-4, -2)$**

5. (G.CO.4) Trapezoid  $P'Q'R'S'$  is the image of trapezoid  $PQRS$ . Explain the transformation that has taken place.  
 **$R_{y\text{-axis}}$**

6. (G.CO.5) Which of the following is not a rotation of the figure at the right?  
A. B. C. D.

Aug 13-7:50 AM

7. (G.CO.5) What type of transformation is shown in the diagram below?  
 **$R_{y=x}$**

8. (G.CO.4) Which of the following capital letters does not have a line of symmetry?  
**A, Z**

9. (G.CO.4) Given the translation  $(x, y) \rightarrow (x, y + 4)$ . What is the preimage of  $(3, 5)$ ?  
 **$(3, 1)$**   
 **$x=3, y+4=5 \rightarrow y=1$**

10. (G.CO.2) The translation "5 units to the left and 3 units down" in coordinate notation would be?  
 **$(x, y) \rightarrow (x-5, y-3)$**

11. (G.CO.3) Use the figure at right to determine which segment represents a 90° counterclockwise rotation of  $\overline{AB}$  about P.  
 **$\overline{FG}$**

12. (G.CO.4) If  $B(-2, 1)$  is reflected about the x-axis, then the coordinates of  $B'$  are?  
 **$(-2, -1)$**

13. (G.CO.4) Give an example of 2 figures that are not an isometry?  
**same size**  
 **$\square \square$**

4. (G.CO.2) What is the line of reflection for a transformation that maps  $(4, -3)$  to  $(-3, 4)$ ?  
 **$y=x$**

5. (G.CO.3) Which description of a rotation would map the figure below onto itself?  
 **$180^\circ, 360^\circ$**

Aug 13-7:51 AM

16. (G.CO.5) The coordinates of  $\triangle LMN$  are  $L(-6, 8)$ ,  $M(-4, 2)$ , and  $N(-10, 4)$  and is translated  $(x, y) \rightarrow (x-6, y+4)$ . What are the coordinates of the new figure?  
 **$L'(-12, 12)$   $M'(-10, 6)$   $N'(-16, 8)$**

17. (G.CO.5) Reflect  $\triangle LMN$  using the rule  $(x, y) \rightarrow (x, -y)$ .  
 **$M(-4, 2) \rightarrow M'(-4, -2)$**   
 **$N(-9, 3) \rightarrow N'(-9, -3)$**   
 **$L(-6, 8) \rightarrow L'(-6, -8)$**   
What line did you reflect  $\triangle ABC$  across?  
 **$R_{x\text{-axis}}$**

18. (G.CO.5) In the coordinate plane below, rotate  $\triangle ABC$  180 degrees about the origin. What are the coordinates of the new figure?  
 **$(x, y) \rightarrow (-x, -y)$**   
 **$A(5, 2) \rightarrow A'(-5, -2)$**   
 **$B(4, -2) \rightarrow B'(-4, 2)$**   
 **$C(-2, 0) \rightarrow C'(2, 0)$**

19. Write an example of an even, odd, and neither function.  
a. NEITHER:  **$3x^2 + 4x^5$**   
b. EVEN:  **$7x^4 + 3x^3$**   
c. ODD:  **$3x^0$**

20. Determine if the given functions are even, odd, or neither.  
a.  $f(x) = 4x^4 + 6$  **even**  
b.  $f(x) = 9x$  **odd**

Aug 13-7:51 AM

August 14, 2018

If a point is translated by the rule  $(x - 4, y + 1)$  and the image is  $(0, -2)$ , what is the location of the pre-image?

**$x - 4 = 0 \rightarrow x = 4$**   
 **$y + 1 = -2 \rightarrow y = -3$**   
 **$(4, -3)$**

Aug 13-1:50 PM

21. (G.CO.5) The triangle  $\triangle ABC$  is in the 2nd quadrant, reflect over the x-axis, rotate 180 degrees.  
 **$(x, y) \rightarrow (-x, -y)$**   
 **$A'(-4, 1) \rightarrow A''(4, 1)$**   
 **$B'(-1, -1) \rightarrow B''(1, 1)$**   
 **$C'(-1, -4) \rightarrow C''(1, 4)$**

22. (G.CO.5) List the sequence of transformations necessary to map  $\triangle ABC$  to  $\triangle A''B''C''$ .  
Transformation 1:  **$R_{x\text{-axis}}$**   
Transformation 2:  **$R_{90^\circ \text{ CW}}$**   
Transformation 3:  **$T_{2, 9}$**

Aug 13-7:51 AM

Unit 1 Test!


You may skip one problem from each page...


please write the word 'skip' on the problem,


otherwise I will have assumed you left the problem unanswered and count it wrong.


Aug 13-7:51 AM


Classify each angle as acute, obtuse, right, or straight.


1) 

2) 

3) 


4) 


5) 


6) 


Aug 13-7:52 AM

Name each angle in four ways.

7) 

8) 

9) 

10) 

Aug 13-7:56 AM

Use the angle addition postulate to find the missing measurements.

11)  $m\angle HJL = 152^\circ$  and  $m\angle HJF = 60^\circ$ .  
Find  $m\angle FLJ$ .

12)  $m\angle QRS = 135^\circ$  and  $m\angle QRH = 74^\circ$ .  
Find  $m\angle HRS$ .

13) Find  $m\angle CDK$  if  $m\angle KDE = 160^\circ$   
and  $m\angle CDE = 180^\circ$ .

14)  $m\angle JKL = 107^\circ$  and  $m\angle MKL = 85^\circ$ .  
Find  $m\angle JKM$ .

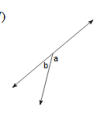
Aug 13-7:57 AM

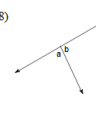
15)  $m\angle FGZ = 52^\circ$  and  $m\angle ZGH = 94^\circ$ .  
Find  $m\angle FGH$ .

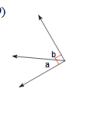
16) Find  $m\angle JIH$  if  $m\angle JIG = 70^\circ$   
and  $m\angle GIH = 52^\circ$ .

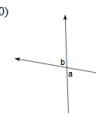
Aug 13-7:57 AM

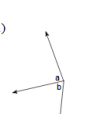
Name the relationship: complementary, linear pair, vertical, or adjacent.

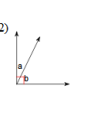
17) 

18) 

19) 


20) 

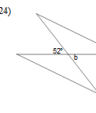
21) 

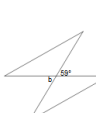
22) 

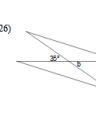
Aug 13-7:57 AM

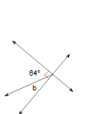
Using vertical pairs, find the measure of angle b.

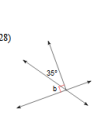
23) 

24) 

25) 

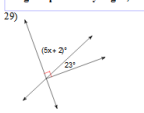
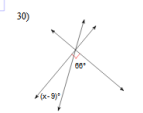
26) 

27) 

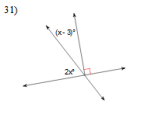
28) 

Aug 13-7:58 AM

Using complementary angles, find the value of  $x$ .


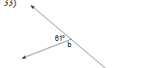
29)  30) 

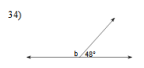
-

31) 

Aug 13-7:58 AM

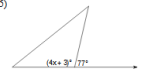
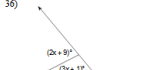
Using linear pairs, find the measure of angle  $b$ .

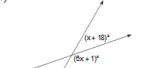
32)  33) 

34) 

Aug 13-7:59 AM

Find the value of  $x$ .

35)  36) 

37) 

Aug 13-7:59 AM