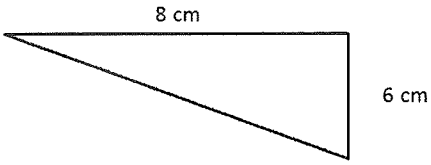
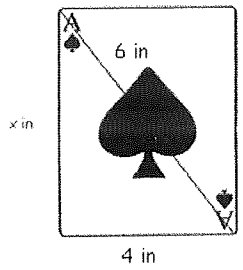
The Pythagorean Theorem Review

Name: _____ Date: _____

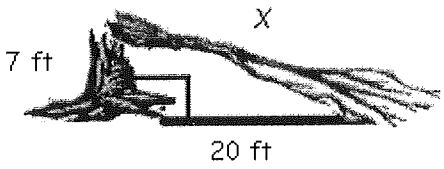
1. What is the value of the hypotenuse in the triangle below?



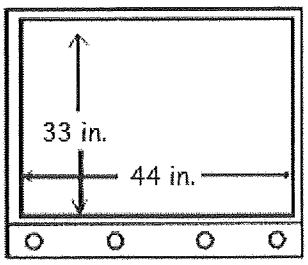
2. Betty measured the diagonal length of a playing card to be 6 inches. The short side of the card is 4 inches. What is the length of the long side of the playing card?



3. Before the owner of a tree-removal service will give an estimate to remove a tree, he must first know the length of the fallen part of the tree (x). Find the length of the fallen part of the tree, and leave your answer in radical form.

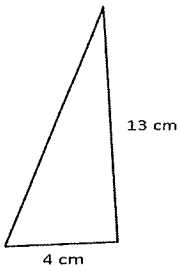


4. Jalen jogged 10 miles due north, then turned due west and jogged 5 more miles. How many miles is Jalen from his starting point? (shortest distance)

5. 

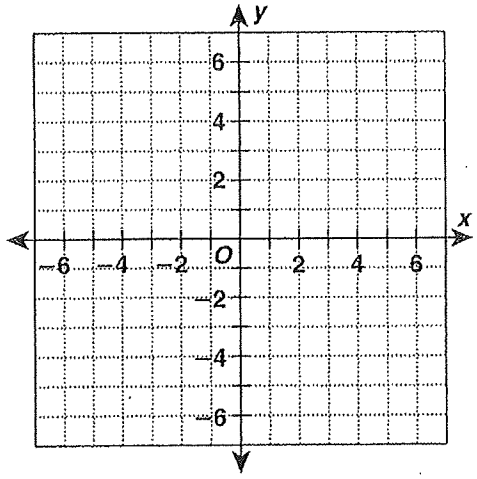
What is the diagonal measurement of the TV screen shown in the figure above?

6. Find the length of the unknown side in the right triangle.

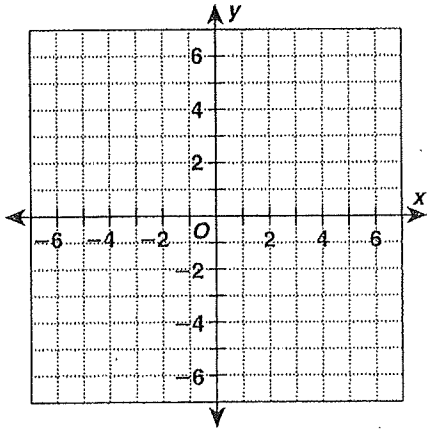


7. An isosceles right triangle has 6 cm legs. Find the length of the hypotenuse.

8. On the graph below, plot the points (-6,-6) and (6, 6). Find the **distance** between the two points.



9. On the graph below, plot the points (5, -2) and (1, 3). Find the **distance** between the two points.



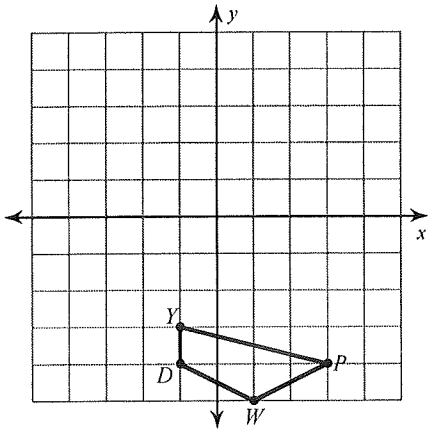
MCC8.G.1. MCC8.G.2, MCC8.G.3, MCC8.G.4 Name_____

Transformations Review

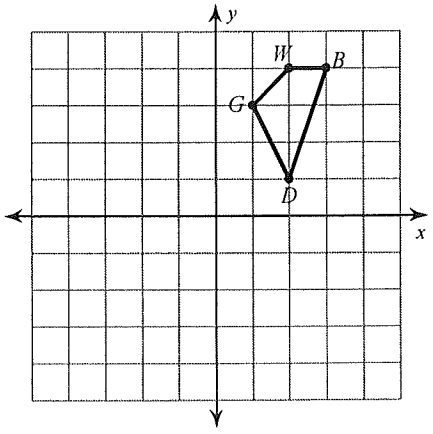
Date_____ Period____

Graph the image of the figure using the transformation given.

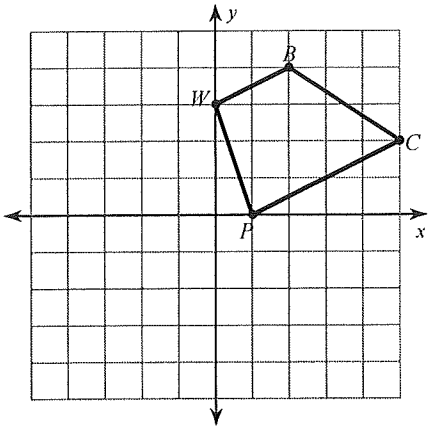
1) rotation 90° clockwise about the origin



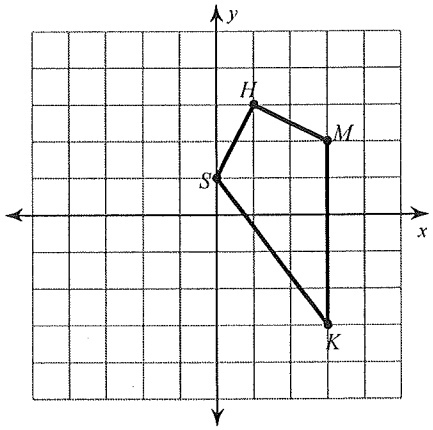
2) translation: $(x, y) \rightarrow (x + 2, y - 6)$



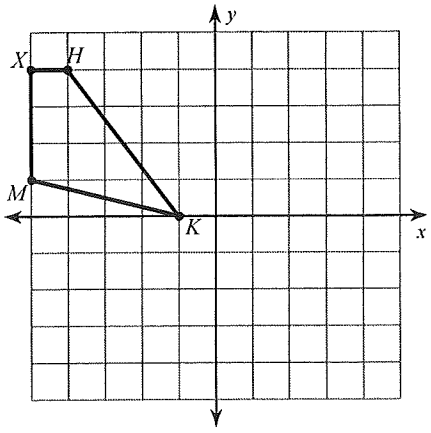
3) rotation 180° about the origin



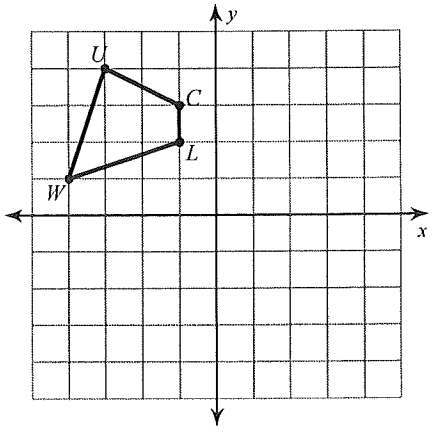
4) reflection across the y-axis



5) translation: $(x, y) \rightarrow (x + 5, y)$



6) reflection across the x-axis



Find the coordinates of the vertices of each figure after the given transformation.

7) translation: $(x, y) \rightarrow (x + 1, y - 1)$
$J(-3, -3)$, $H(-4, -2)$, $I(-2, 3)$, $Z(-1, 2)$

8) reflection across the y-axis
$U(-5, 1)$, $M(-2, 5)$, $K(-3, 0)$

9) translation: $(x, y) \rightarrow (x + 2, y)$
$V(1, -3)$, $E(2, -2)$, $Q(3, -4)$, $P(2, -5)$

10) rotation 180° about the origin
$Z(1, -5)$, $P(2, -3)$, $S(5, -3)$

11) rotation 180° about the origin
$P(3, -4)$, $X(3, -2)$, $M(5, -2)$

12) reflection across the x-axis
$N(3, -2)$, $T(3, -1)$, $J(5, -3)$

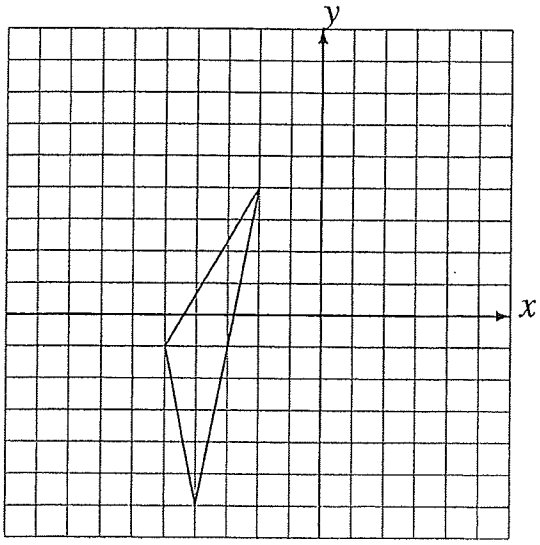
13) reflection across the x-axis
$H(-4, 3)$, $X(-2, 5)$, $F(-2, 2)$

14) rotation 90° counterclockwise about the origin
$U(0, 1)$, $J(-2, 4)$, $B(0, 5)$, $R(3, 4)$

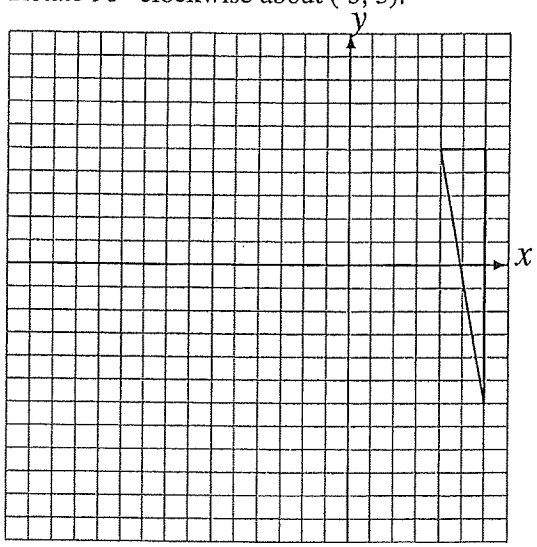
15) rotation 90° clockwise about the origin
$T(-3, 1)$, $I(-3, 2)$, $N(-1, 4)$, $B(1, 2)$

16) translation: $(x, y) \rightarrow (x + 1, y - 3)$
$A(-3, -1)$, $U(-4, 1)$, $M(-3, 2)$, $B(0, 3)$

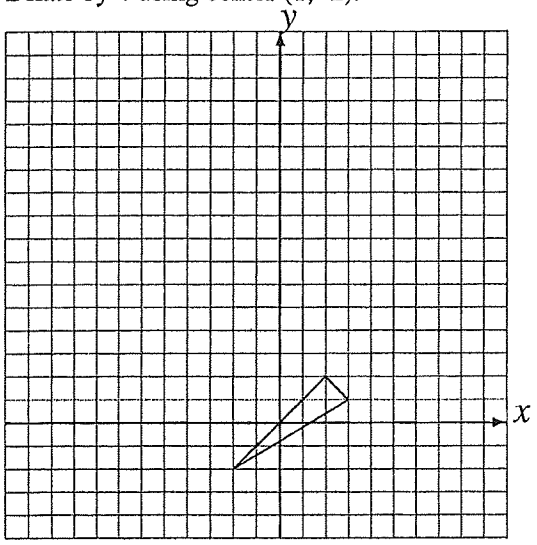
Rotate 180° about (-3, 1).



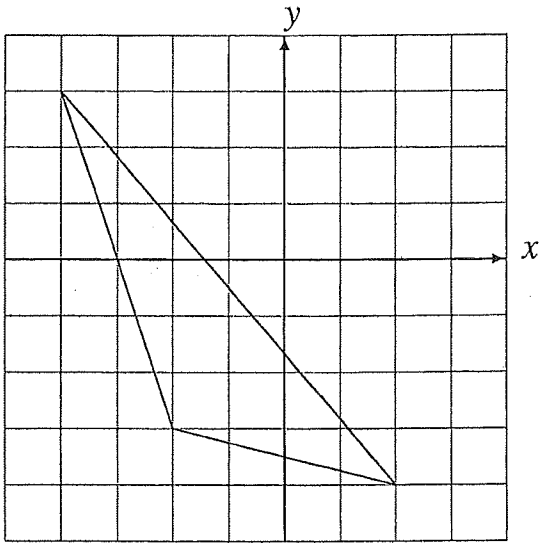
Rotate 90° clockwise about (-5, 3).



Dilate by 4 using center (1, -2).



Dilate by $\frac{1}{4}$ using center (-1, 1).

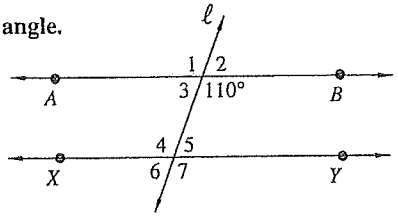


NAME _____ DATE _____

Practice 71

Skills and Applications of Lesson 6-4

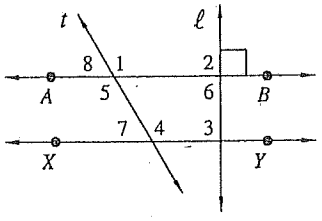
In the figure at the right, $\overleftrightarrow{AB} \parallel \overleftrightarrow{XY}$. Find the measure of each angle.



1. $\angle 1$
2. $\angle 2$
3. $\angle 3$
4. $\angle 4$
5. $\angle 5$
6. $\angle 6$

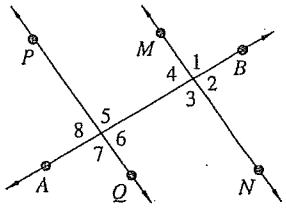
7. Lines $\overleftrightarrow{MN}$ and $\overleftrightarrow{AB}$ intersect at Q. Also, $\overleftrightarrow{MN} \perp \overleftrightarrow{AB}$. Find the measures of $\angle MQA$, $\angle NQA$, $\angle MQB$, and $\angle NQB$.

In the figure at the right, $\overleftrightarrow{AB} \parallel \overleftrightarrow{XY}$, and $m\angle 1 = 120°$. Tell whether each statement is true or false.



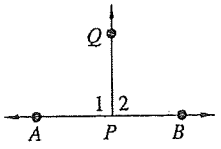
8. $m\angle 2 = 90°$
9. $\overleftrightarrow{XY} \perp l$
10. $m\angle 3 = 60°$
11. $m\angle 4 = 120°$
12. $m\angle 5 = 120°$
13. $m\angle 8 = 120°$
14. $l \parallel t$
15. $m\angle 7 = 60°$
16. $l \perp t$
17. $m\angle 6 = 120°$

In the figure at the right, $\overleftrightarrow{MN} \parallel \overleftrightarrow{PQ}$ and the measure of $\angle 6$ is 85°. Find the measure of each angle.



18. $\angle 7$
19. $\angle 3$
20. $\angle 2$
21. $\angle 8$
22. $\angle 5$
23. $\angle 4$

24. In the figure at the right, $m\angle 1 = 89°$ and $m\angle 2 = 91°$. Is $\overrightarrow{PQ}$ perpendicular to $\overleftrightarrow{AB}$?



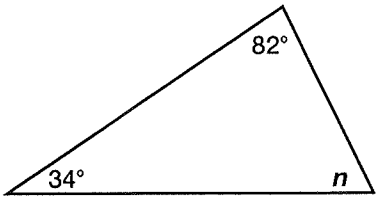
Name _____ Date _____

Practice 14.5

Triangles and Angle Sums

Classify each triangle by its sides and by its angles. Then find the degree measure of $\angle n$ in each triangle.

1.



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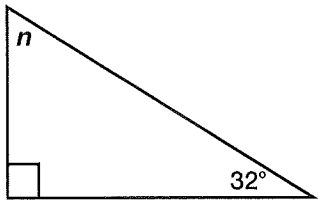
2.



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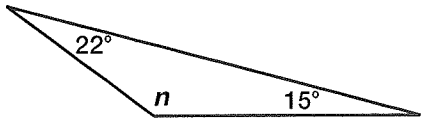
3.



_____

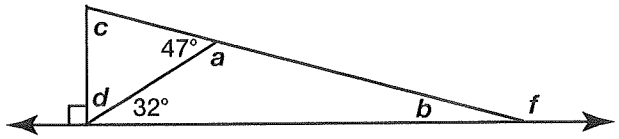
Use the diagram to find each angle measure.

4. a _____

5. b _____

6. d _____

7. c _____



Draw an example of each.

8. a triangle that is both right and isosceles

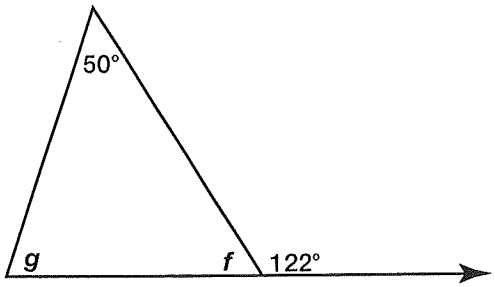
9. a triangle that is both acute and equilateral

10. a triangle that is both obtuse and isosceles

Algebra • Equations **Use the diagram. Write and solve an equation to find each angle measure.**

11. $\angle f$ _____

12. $\angle g$ _____



Test Prep

13. Two angles in a triangle measure 34° and 61°. What is the measure of the third angle?

A 75°

B 85°

C 95°

D Cannot be determined.

14. Two angles form a straight angle. One angle measures 75°. Describe how to find the measure of the other angle.

_____

_____

_____