

Transformations Mixed Review Questions

1. If an image with the coordinates (1, 2), (4, 2) and (-1, 0) is dilated using a scale factor of 4, what are the coordinates of the new image?

$DK=4$ $(4, 8)$ $(16, 8)$ $(-4, 0)$

2. Define a reflection, Translation, Dilation and a Rotation?

a flip

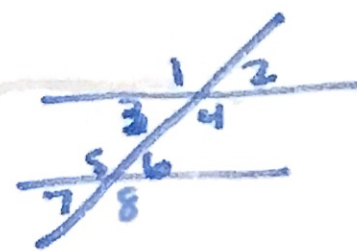
a slide

an enlargement or reduction

→ a turn

3. A) Name the all of the congruent angle pairs when parallel lines are cut by a transversal.

$\angle 1 \cong \angle 4 \cong \angle 5 \cong \angle 8$ $\angle 2 \cong \angle 3 \cong \angle 6 \cong \angle 7$

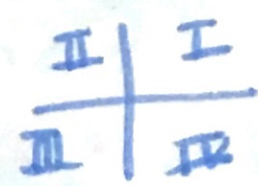


- B) Name all of the supplementary angles when parallel lines are cut by a transversal.

$\angle 1 + \angle 2$ $\angle 1 + \angle 3$ $\angle 2 + \angle 4$ $\angle 3 + \angle 4$
 $\angle 5 + \angle 6$ $\angle 5 + \angle 7$ $\angle 6 + \angle 8$ $\angle 7 + \angle 8$

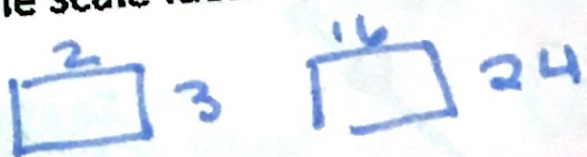
4. If you translate the point (-10, 10) one unit right and 14 units down, which quadrant will the image lie?

$T_{1, -14}$ $(-9, -4)$



3 RD Quadrant

5. Victoria has a photo of a deer that is 2 inches by 3 inches. She wants to sketch a figure that is 16 inches by 24 inches. What is the scale factor of the dilation?



K=8

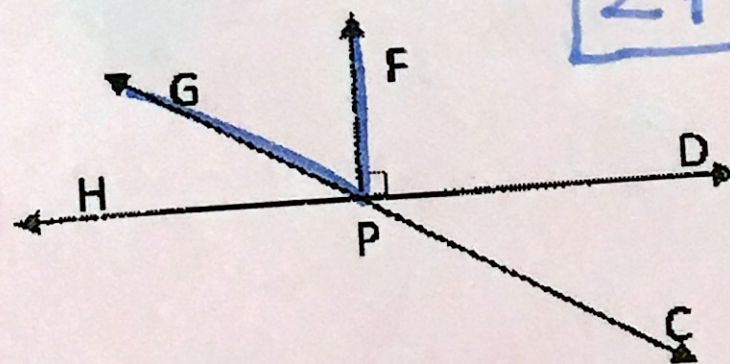
6. Which transformation results in a figure that is not congruent to the original figure?

Dilation

7. What is the complement of 78° ? What is the supplement of 78° ?

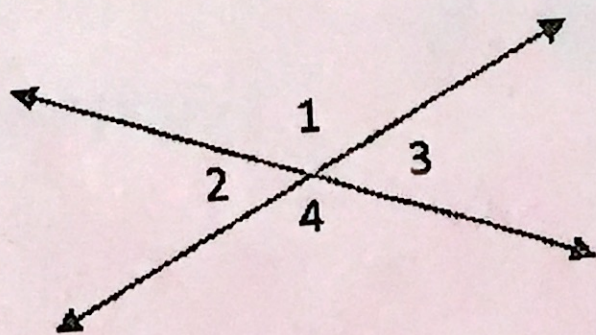
$90 - 78 = \boxed{12^\circ}$ $180 - 78 = \boxed{102^\circ}$

8. In the diagram below, $\overline{PF} \perp \overline{HD}$. Which angles is supplementary to $\angle GPF$?



$\angle FPC$

9. Which of the pairs of angles are vertical angles?



$\angle 1 + \angle 4$

or

$\angle 2 + \angle 3$

10. $\angle 1 = 7x + 10$ and $\angle 2 = 3x - 30$ are supplementary. What is the value of x ?

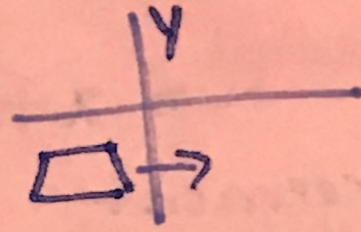
$$7x + 10 + 3x - 30 = 180$$

$$10x - 20 = 180$$

$$10x = 200$$

$$\boxed{x = 20^\circ}$$

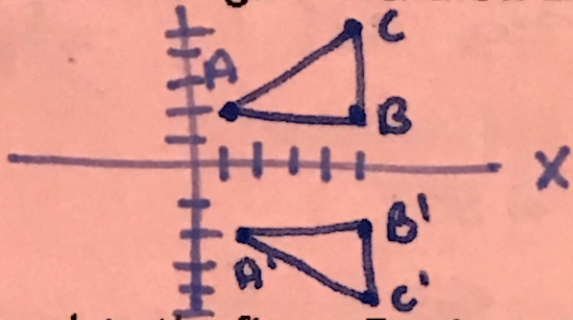
11. A trapezoid is originally located in the third quadrant. If the figure is reflected over the y -axis, which quadrant will it be in?



$$\boxed{4^{th}}$$

12. Use graph paper for the following problems. Graph and connect the following points $A(1,2)$ $B(5,2)$ $C(5,5)$.

A) Reflect the figure over the x -axis. Label the transformed figure using A' , B' , and C'



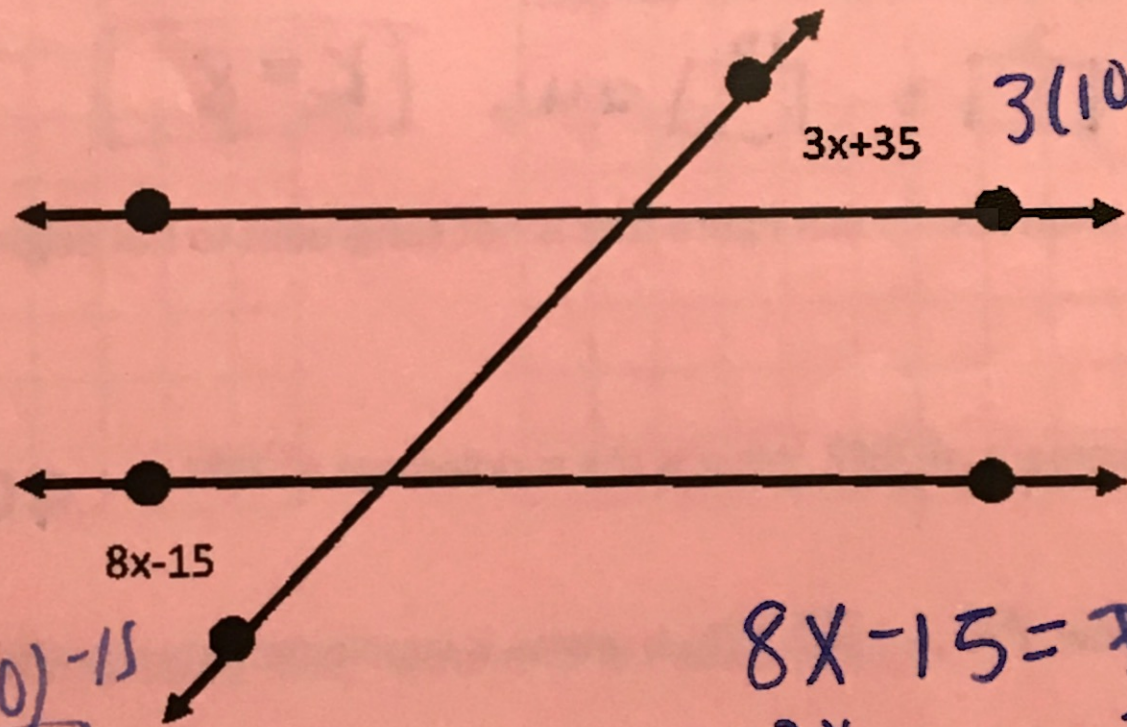
$$A'(1, -2) \quad C'(5, -5)$$

$$B'(5, -2)$$

B) Translate the figure 7 units to the left and 2 units up. Label the transformed figure using A'' , B'' , and C''

should state which figure! (based off second image)
 $A''(-5, 0)$ $C''(-2, -3)$
 $B''(-2, 0)$

13. Name the angle and state the relationship in the figure below. Find the value of x and the measure of each



$$3(10) + 35 = \boxed{65^\circ}$$

$$8(10) - 15 = \boxed{65^\circ}$$

$$\begin{array}{r} 8x - 15 = 3x + 35 \\ -3x \quad -3x \\ \hline 5x - 15 = 35 \end{array}$$

$$\begin{array}{r} 5x - 15 = 35 \\ +15 \quad +15 \\ \hline 5x = 50 \end{array}$$

$$5x = 50$$

$$\boxed{x = 10^\circ}$$