Final Exam – Thursday & Friday, June 14th & 15th

Transformations

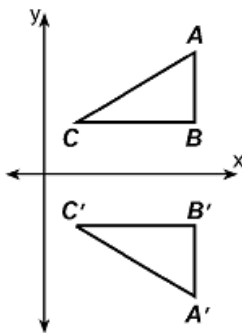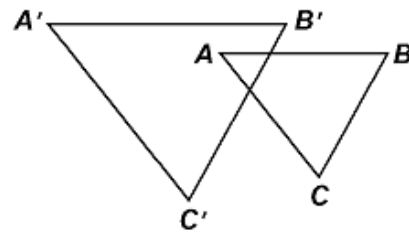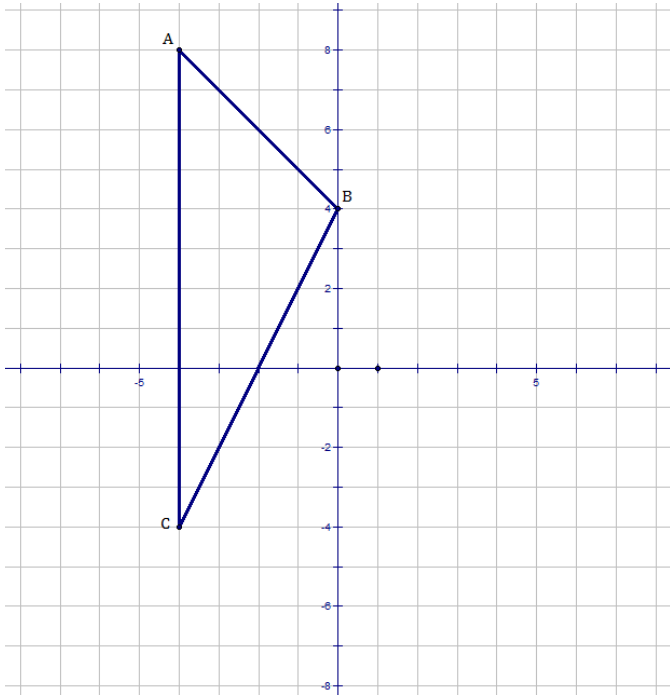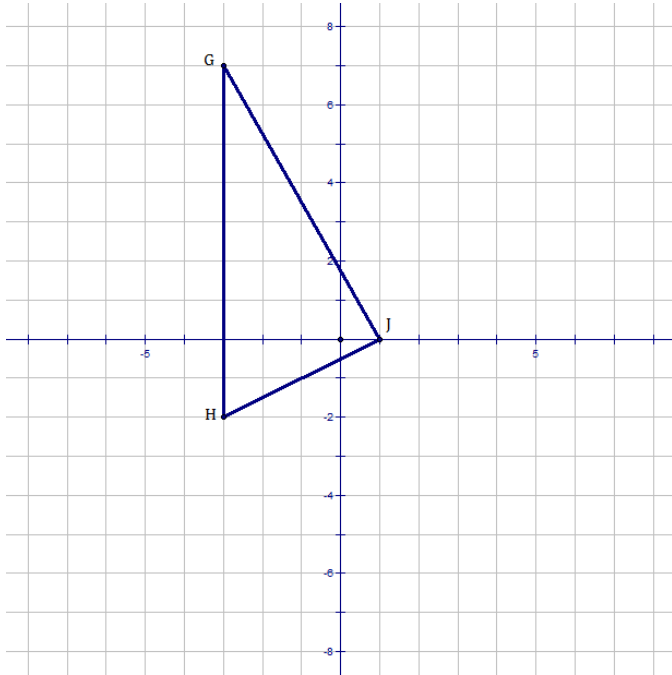|	
1. If ΔXYZ is reflected over the x-axis, what will be the coordinates of Y'? **A** (1, -4) **C** (-4, 1) **B** (-1, 4) **D** (4, 1)	2. What type of transformation is shown below? **A** Reflection **B** Translation **C** Rotation **D** Dilation
3. A rotation of a figure can be described as: **A** A slide of the figure. **B** An enlargement or reduction of the figure's size. **C** A mirror image of the figure. **D** A turning of the figure about some fixed point.	4. The coordinates of point *R* after a dilation of 3 is (6, 15). What was the **original** location of point *R*? **A** (2, 5) **B** (3, 12) **C** (9, 18) **D** (18, 45)
5. In the accompanying diagram, what type of transformation creates the image of ΔA'B'C'? **A** Translation **C** Reflection **B** Dilation **D** Rotation	6. In the accompanying diagram, ▲*ABC* is similar to but not congruent to ▲*A'B'C'*. Which transformation is represented by ▲*A'B'C'*? **A** Reflection **C** Translation **B** Dilation **D** Rotation
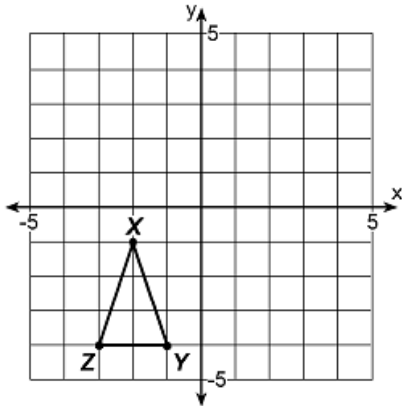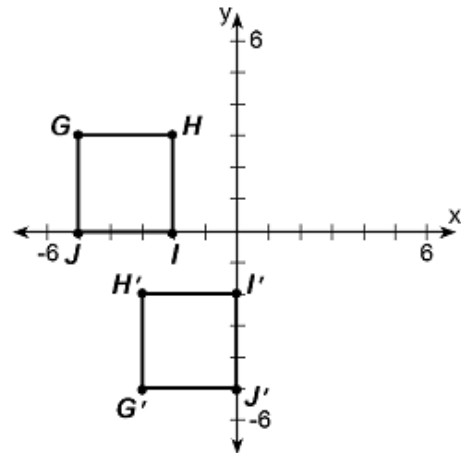
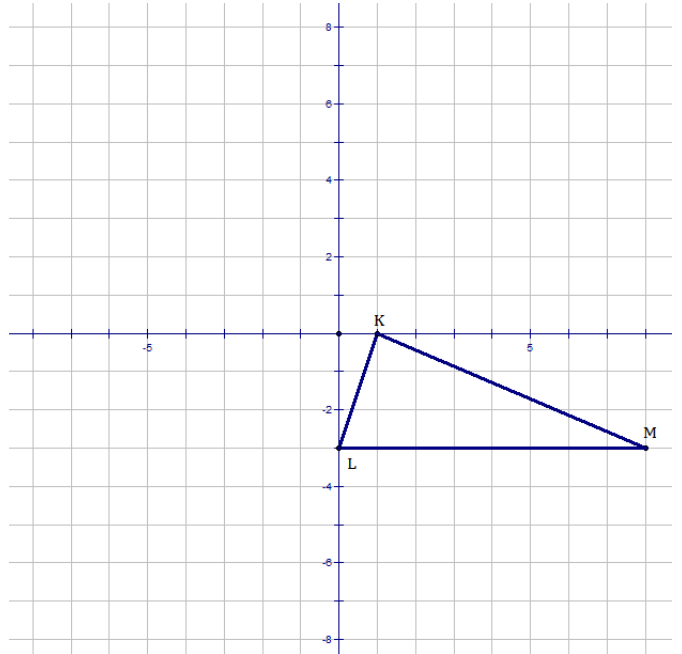| 7. Triangle ABC is shown below. Show the image of this triangle after a dilation with a scale factor of $\frac{1}{4}$.	8. Triangle DEF is shown below. Show the image of ΔDEF after a translation 3 units right and 8 units down.
9. Show the image of ΔGHJ after a reflection over the y-axis.	10. Show the image of ΔKLM after a counter-clockwise rotation 90°.
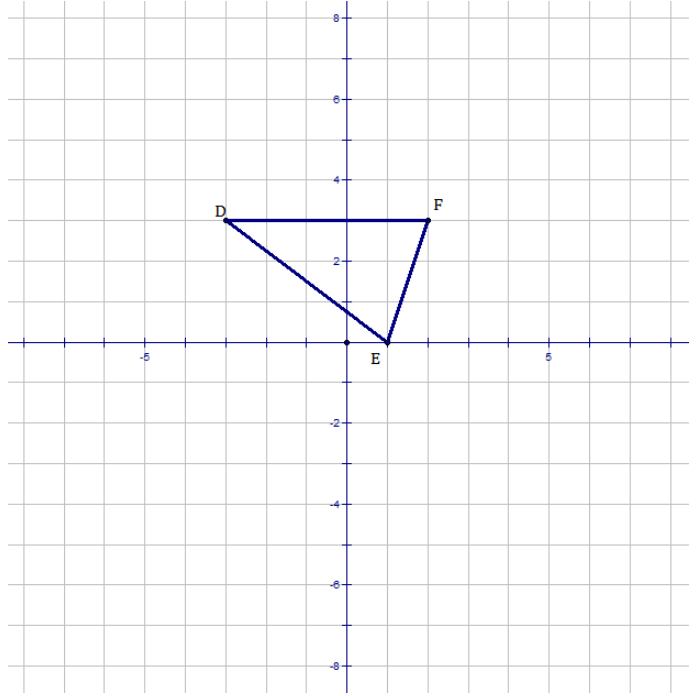
System of Equations
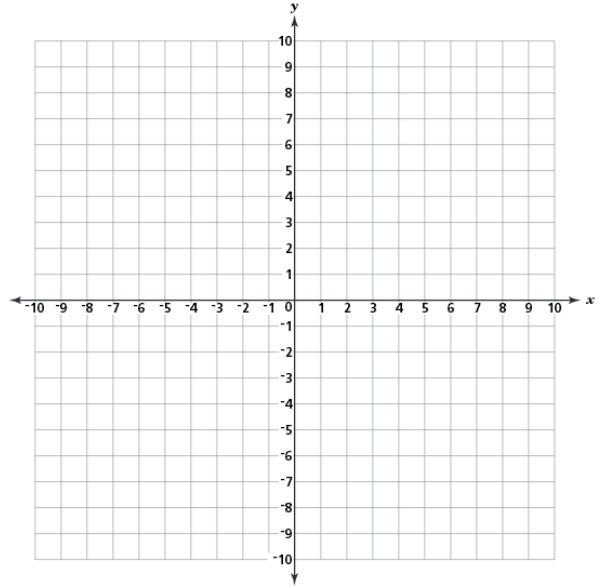
| 11. Solve using substitution.	12. Solve graphically.
$y = 5x$ $3x + y = -8$	$y = -\dfrac{2}{3}x - 2$ $y = x + 3$
13. Solve using elimination. $3x + 4y = 39$ $-3x + 2y = 15$	14. Kate and Sam are buying snack in the school cafeteria. Kate buys 3 cookies and 2 pretzels for $3.25. Sam buys 2 cookies and 2 pretzels for $3.00. Determine the price of each cookie and pretzel. *Show your work.* *Answer* $\$$_____ *for each cookie* $\$$_____ *for each pretzel*

Special Angles
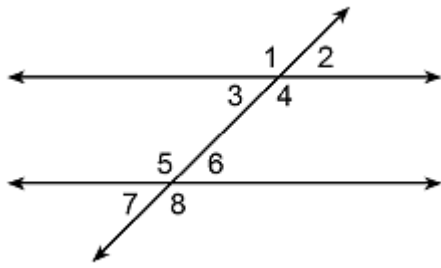
16. Solve for *x*.

15. Identify a pair of angles that satisfy each of the following special relationships.
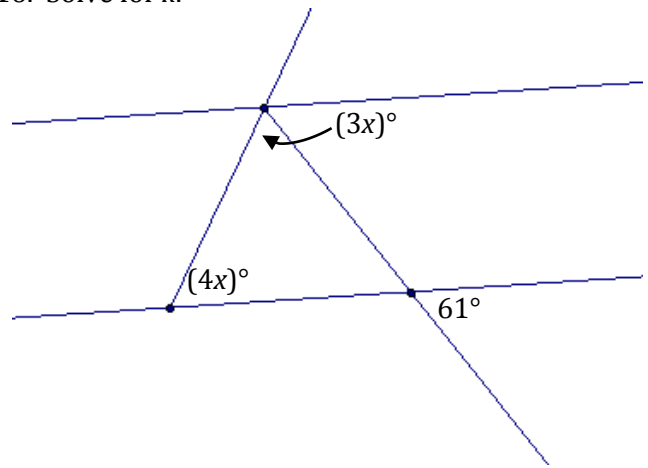
Corresponding ∠_____ and ∠_____

Vertical ∠_____ and ∠_____

Alternate Interior ∠_____ and ∠_____

Alternate Exterior ∠_____ and ∠_____

Supplementary ∠_____ and ∠_____

17. In the diagram below, parallel lines are cut by a transversal.
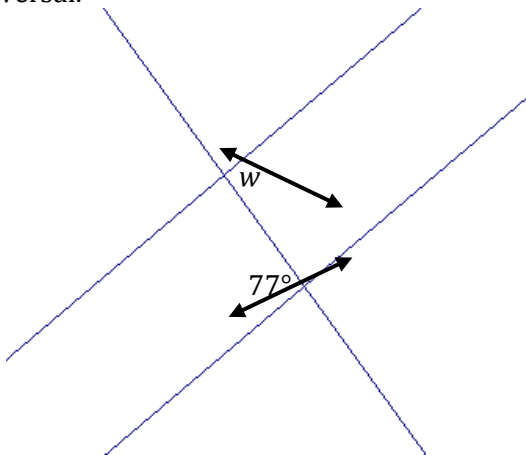
Which of the following statements correctly explains the value of *w*?

A   103°, because the angles shown are supplementary.

B   77°, because the angles shown are vertical.

C   77°, because the angles shown are corresponding.

D   77°, because the angles shown are alternate interior.

18. Given two parallel lines cut by a transversal.
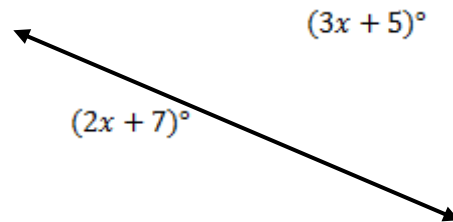
Which equation could be used to determine the value of *x*?

A $(3x + 5) + (2x + 7) = 90$

B $(3x + 5) + (2x + 7) = 180$

C $(3x + 5) = (2x + 7)$

D $(3x + 5) \cdot (2x + 7) = 180$