UNIT 6 and 7 – System of Equations and Congruency Assessment

Name Exemple PER_____ DATE_____

ACED2	AREIC6	GCO7	GCO8

Computation

4	3	2	1
Response has no recall errors, *minimal* procedural errors* and no conceptual errors**	**Response has no recall errors, minimal procedural errors and *minimal* conceptual errors**	**Response has no recall errors, but has several procedural errors OR several conceptual errors**	**Recall errors exist OR Steps taken are not related to problem OR Response left blank**

Written Responses

4	3	2	1
Response is written in a complete sentence and uses appropriate academic vocab	**Response is written in a complete sentence, and minimal errors exist in use of academic vocab**	**Response is not written in a complete sentence OR no academic vocab**	**Concept of response is not related to problem OR Response is left blank**

***Procedural errors** are mistakes made in the math
****Conceptual errors** are mistakes made in the steps one take

V.2

1. **(ACED2)** ***Explain your answer choice in the space below.***

Katelyn starts a job that pays $8.50 per hour. Katelyn's manager says that if her job reviews are favorable, she can expect annual pay rate increases of $0.75. Which equation represents the relationship between years on the job, *y*, and pay per hour, *p*?

A. $y = 0.75p + 8.50$
B. $p = 8.50y + 0.75$
C. $y = 8.50p + 0.75$
D. $p = 0.75y + 8.50$

The starting value is $8.50 and that changes by 0.75 each year so the rate of change is 0.75.

2. **(AREIC6)** ***For the problem below, explain your answer in the space provided.***

Consider the equation $3x - 2y = 6$. If possible, find a second linear equation to create a system of equations that has...

a. One solution. $4x - 2y = 8$

These equations will produce graphs that intersect once since they have different slopes.

b. No solutions. $3x - 2y = 0$

These equations have no solution since their graphs are parallel and do not intersect.

3. **(AREIC6)** ***For the problem below, show your work and explain your answer in the space below.***

A garden store has two sizes of plants for sale.

- Plants in small pots cost $3.50
- Plants in big pots cost $6.00
- One day, 18 plants were sold for a total of $80.50

How many plants in BIG pots were sold at the store that day?

x = # of small pots sold

y = # of big pots sold

Equation 1: $x + y = 18$

Equation 2: $3.50x + 6y = 80.50$

Multiplying Equation 1 by -6 →

$3.50x + 6y = 80.50$

$-6x - 6y = -108$

$-2.50x = -27.50$

$\frac{-2.50x}{-2.50} = \frac{-27.50}{-2.50}$

$x = 11$

$x + y = 18$

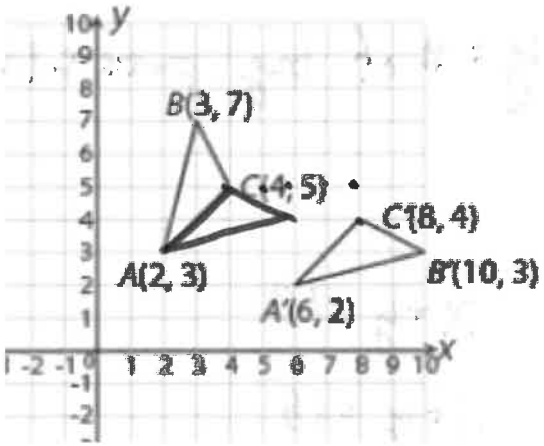
$11 + y = 18$

$y = 7$

7 plants in big pots were sold.

4. (GCO7)

The design for a building has two triangular windows placed on a coordinate plane, as shown below.

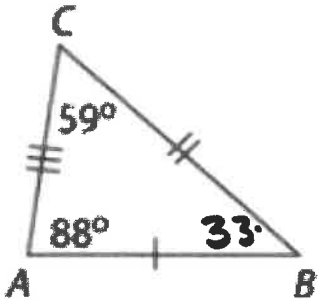


Use rigid motions to explain why the two windows are congruent.

If you reflect $\triangle ABC$ over $\overline{AC}$ and translate that figure 4 units to the right and one down, all side lengths and angles will line up (match) to those in $\triangle A'B'C'$.

5. (GCO8)

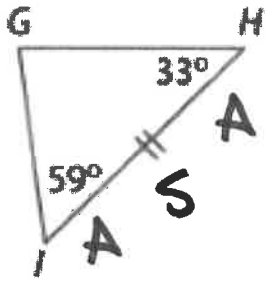
Triangle $\triangle ABC$ is shown below.



$$\begin{array}{r} 88^\circ \\ +\ 59^\circ \\ \hline 147^\circ \end{array} \qquad \begin{array}{r} 180^\circ \\ -\ 147^\circ \\ \hline 33^\circ \end{array}$$

Determine if Triangle ABC is congruent to either of the triangles below. For each triangle, write a congruency statement and cite the Theorem that proves their congruency.

a.)



Congruency Statement $\triangle ABC \cong \triangle GHI$

Congruency Theorem ASA

Series of Rigid Transformations Reflect $\triangle ABC$ over $\overline{AB}$ and translate down

Sentence Starters

Q1.

I chose Equation ____ because...

Q.2

These equations have one solution since...

These equations have no solutions since...

Q.3

The number of _____ sold at the store was _____.

Q.4

To prove that the two windows are congruent, one must...