Unit 3 Study Guide Answers
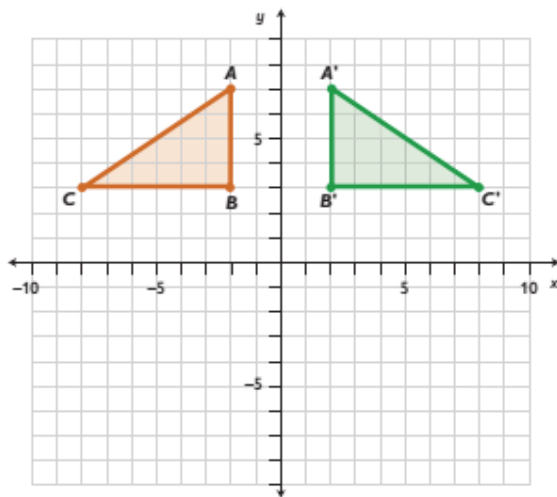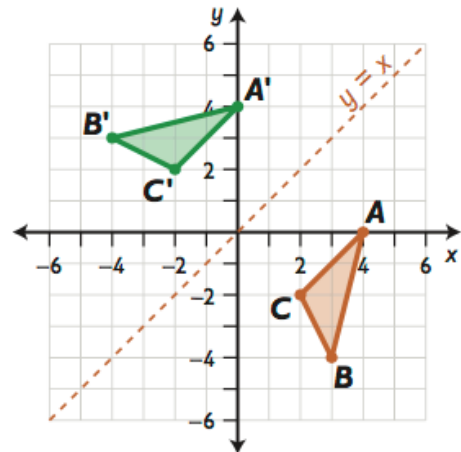
1) D
2) D

3)

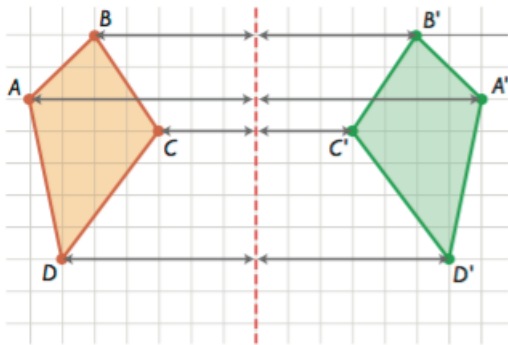

4) A'(0, 4), B'(−4, 3), C'(−2, 2)

5) In a reflection, all the reflected points are located at the same distance from the line of reflection as the corresponding points of the original figure.


This means that all the points on the reflected figure are at the same relative distance from one another as they are in the original figure. For example, points A' and B' are at the same distance from one another as points A and B are in the original figure. Therefore, all the corresponding side lengths are the same, and the reflected figure is congruent with the original figure.
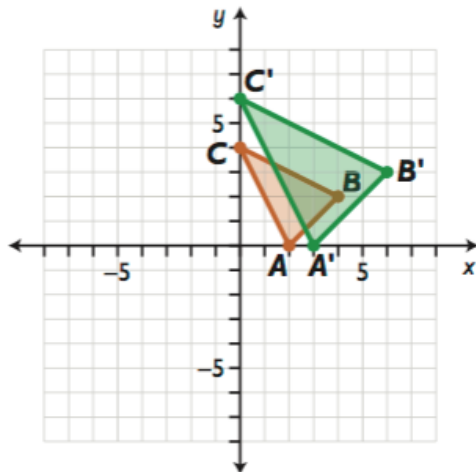
6) $A'(6, 3), B'(2, 3), C'(0, 6)$
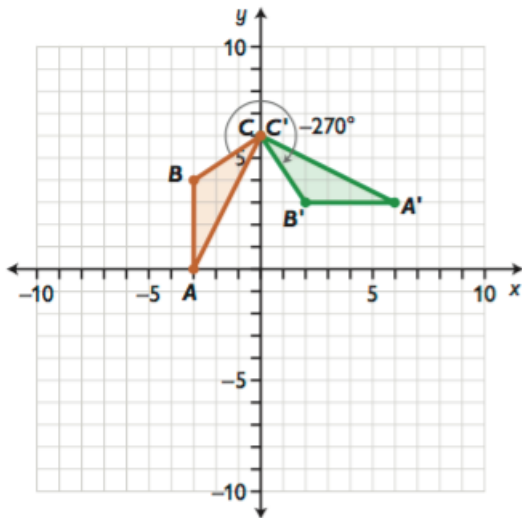
7) $A'(1, 4), B'(-1, 2), C'(1, 0)$
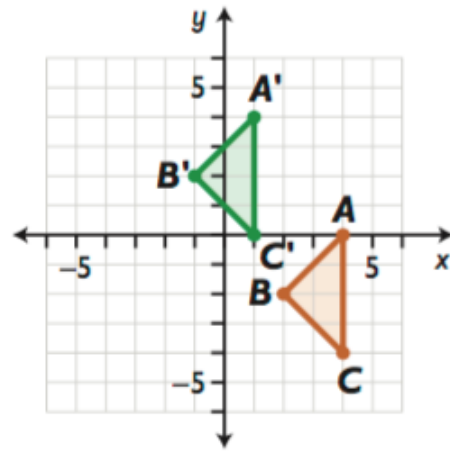
8) $A'(3, 0), B'(6, 3), C'(0, 6)$

9) $\angle B = 105°$

$\angle C = 21°$
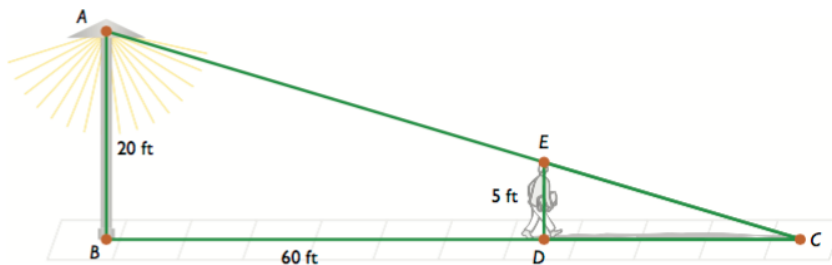
$\angle D = 54°$

$\angle F = 21°$

$AC = 24$ units

$DE = 4.5$ units

10) The man's position in front of the streetlight creates two similar triangles.

$\dfrac{AB}{DE} = \dfrac{20}{5} = \dfrac{BD + CD}{CD} = \dfrac{60 + CD}{CD}$

$4 \cdot CD = 60 + CD$

$3 \cdot CD = 60$

$CD = 20$

The length of the shadow when the man is 60 ft away from the streetlight is 20 ft.

11) The triangles are similar because two of the angles are equal; so they are similar by AA