Test, Form 2A

SCORE

Write the letter for the correct answer in the blank at the right of each question.

1. A survey of 12 students showed that 7 liked football, 10 liked basketball, and 5 liked both. How many students just liked basketball? Use the *draw a diagram* strategy.

A. 12

C. 5

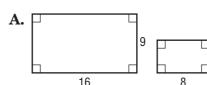
B. 10

D. 2

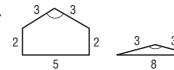
1. ____C

- **2.** Debbie is painting an image on a piece of art canvas. The image she is reproducing is 3 inches by 5 inches. She enlarges the dimensions 4 times. Which of the following statements is *not* true?
 - **F.** The perimeter of the original image and the perimeter of the new image are related by a scale factor of 4.
 - **G.** The area of the new image is 4 times the area of the original image.
 - **H.** The area of the original image and the area of the new image are related by a scale factor of 16.
 - **I.** The perimeter of the original image is $\frac{1}{4}$ the perimeter of the new image.
- 2. ____G

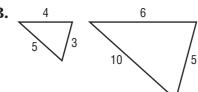
3. Which pair of polygons is similar?



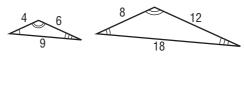
C



B



D.



3. ____D

4. Mitzi is 64 inches tall and casts a 48 inch shadow. Her daughter, who is standing next to her, casts a 30 inch shadow. How tall is her daughter?

F. 47.5 in.

H. 35 in.

G. 40 in.

I. 22.5 in.

, G

5. Which of the following statements is *not* true if quadrilateral *ABCD* is congruent to quadrilateral *RSTU?*

A. $\overline{AB} \cong \overline{RS}$

C. $\angle T \cong \angle C$

B. $\overline{CD} \cong \overline{TU}$

D. $\angle A \cong \angle U$

5. D

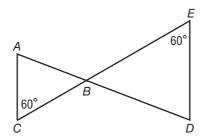
Test, Form 2A (continued)

SCORE

6. The length of a rectangle is 18 centimeters and the width is 6 centimeters. A similar rectangle has a width of 2 centimeters. What is the length of the second rectangle?

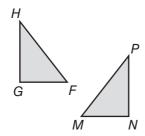
6 cm

7. Determine whether the triangles are similar. If so, write a similarity statement.



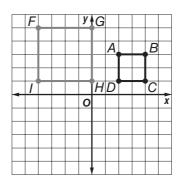
similar; $_{7}$ $\triangle ABC \sim \triangle DBE$

8. Determine if the two figures are congruent by using transformations. Explain your reasoning.



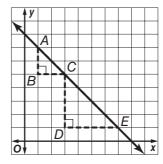
congruent; figure reflected then translated

9. Determine if the two figures are similar by using transformations. Explain your reasoning.



similar; figure dilated then 9. translated

10. Write a proportion comparing the rise to the run for each of the similar slope triangles shown at the right. Then find the numeric value.



$$\frac{AB}{BC} = \frac{CD}{DE}$$

$$\frac{-2}{2} = \frac{-4}{4} = -1$$