

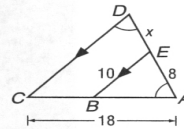
**Part I** Write the letter for the correct answer in the blank at the right of each question.

1. If quadrilateral  $ABCD \sim$  quadrilateral  $PQRS$ , which proportion must be true? 1. \_\_\_\_\_  
 A.  $\frac{AC}{AD} = \frac{PQ}{PS}$       B.  $\frac{BC}{CD} = \frac{QR}{RS}$       C.  $\frac{AB}{BD} = \frac{PQ}{QR}$       D.  $\frac{CD}{AB} = \frac{PQ}{RS}$

2. This fall 126 students participated in the soccer program, while 54 played volleyball. What was the ratio of soccer players to volleyball players? 2. \_\_\_\_\_  
 A.  $\frac{3}{4}$       B.  $\frac{3}{7}$       C.  $\frac{4}{3}$       D.  $\frac{7}{3}$

3. The ratio of the measures of the angles of a triangle is 2:3:10. What is the least angle measure? 3. \_\_\_\_\_  
 A. 12      B. 15      C. 24      D. 36

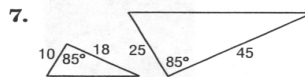
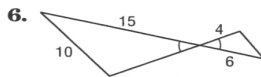
4. Find  $x$ . 4. \_\_\_\_\_  
 A. 2      B. 4.8  
 C. 6      D. 6.4



5. If rectangle  $ABCD \sim$  rectangle  $EFGH$ , the perimeter of  $ABCD$  is 54 centimeters, and the perimeter of  $EFGH$  is 36 centimeters, what is the scale factor of  $ABCD$  to  $EFGH$ ? 5. \_\_\_\_\_  
 A.  $\frac{2}{3}$       B.  $\frac{3}{2}$       C.  $\frac{3}{5}$       D.  $\frac{5}{3}$

**Part II**

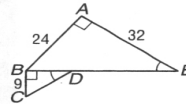
For Questions 6 and 7, determine whether each pair of triangles is similar. Justify your answer.



6. \_\_\_\_\_

7. \_\_\_\_\_

8. If  $\triangle ABE \sim \triangle BCD$ , find  $DE$  and the scale factor of  $\triangle ABE$  to  $\triangle BCD$ .



8. \_\_\_\_\_

9. Quadrilateral  $ABCD \sim$  quadrilateral  $RSUV$ ,  $m\angle ABC = 120$ , and the scale factor of  $ABCD$  to  $RSUV$  is  $\frac{8}{5}$ . What is  $m\angle RSU$ ? 9. \_\_\_\_\_

10. **MODELS** Sasha made a model of a clipper ship. If her model has a length of 18 inches, and the original ship had a length of 160 feet and a width of 32 feet, what should be the width of her model? 10. \_\_\_\_\_