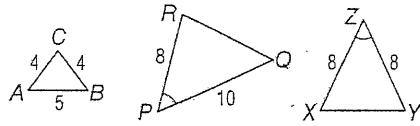


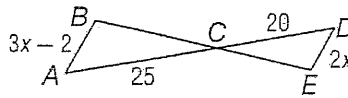
Chapter 7 Practice

(Lessons 7-1 through 7-2)

- The ratios of measures of the angles in $\triangle ABC$ is 4:13:19. Find the measures of the angles.
- SCHOOL ELECTIONS** Henrietta conducted a random survey of 60 students and found that 36 are planning to vote for her as class president. If there are 460 students in Henrietta's class, predict the total number of students who will vote for her as class president.
- Are any two of the three triangles similar? If so, write the appropriate similarity statement.



- If $\triangle ABC \sim \triangle DEC$, find x and the scale factor of $\triangle ABC$ to $\triangle DEC$.



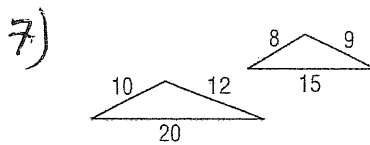
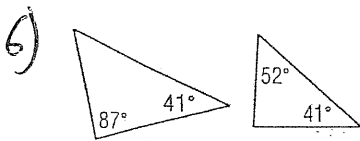
- MULTIPLE CHOICE** In a rectangle, the ratio of the length to the width is 5:2, and its perimeter is 126 centimeters. Find the width of the rectangle.
 A 9 cm B 18 cm C 45 cm D 50.4 cm

- _____
- _____
- _____
- _____
- _____

Chapter 7 Practice

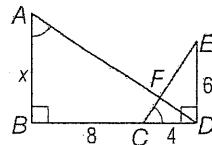
(Lessons 7-3 and 7-4)

For Questions 1 and 2, determine whether each pair of triangles is similar. Justify your answer.



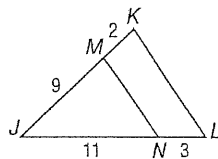
- _____
- _____

- 8) Identify the similar triangles in the figure, then find the value of x .



- _____

- 9) Determine whether $\overline{MN} \parallel \overline{KL}$. Justify your answer.



- _____

- 10) In $\triangle ABC$, \overline{DE} is parallel to \overline{AC} and $DE = 10$. Find the length of \overline{AC} if \overline{DE} is the midsegment of $\triangle ABC$.

7 Chapter 7 Vocabulary Review

cross products	midsegment of a triangle	scale drawing
dilation	proportion	scale factor
enlargement	ratio	scale model
extremes	reduction	similar polygons
means	scale	similarity transformation

Choose the correct term to complete each sentence.

11. If there are 15 girls and 9 boys in an art class, the (ratio, scale factor) of girls to boys in the class is 5:3. 11. _____
12. If $\triangle ABC \sim \triangle DEF$, $AB = 10$, and $DE = 2.5$, then the (scale factor, proportion) of $\triangle ABC$ to $\triangle DEF$ is 4:1. 12. _____

Choose from the terms above to complete each sentence.

13. In $\triangle LMN$, P lies on \overline{LM} and Q lies on \overline{LN} . If $PQ = \frac{1}{2}MN$, \overline{PQ} is called a(n) ? 13. _____
14. The product of the ? in the equation $\frac{3}{x} = \frac{24}{30}$ is 90. 14. _____
15. The product of the ? in the equation $\frac{3}{x} = \frac{24}{30}$ is $24x$. 15. _____

Write whether each sentence is true or false. If false, replace the underlined term to make a true sentence.

16. If quadrilaterals $ABCD$ and $WXYZ$ have corresponding angles congruent and corresponding sides proportional, they are called cross products. 16. _____
17. The equation $\frac{3}{x} = \frac{24}{30}$ is called a(n) scale factor. 17. _____
18. In a proportion, the cross products of the extremes equals the cross product of the means. 18. _____

Define each term in your own words.

19. equality of cross products 19. _____
20. midsegment 20. _____

Chapter 7 Practice

(Lessons 7-1 through 7-2)

$$4x + 13x + 19x = 180$$

$$36x = 180 \quad x = 5$$

$$4x \rightarrow 20$$

$$13x \rightarrow 65$$

$$19x \rightarrow 95$$

1. The ratios of measures of the angles in $\triangle ABC$ is 4:13:19. Find the measures of the angles.

$$= 180$$

1. 20° 65° 95°

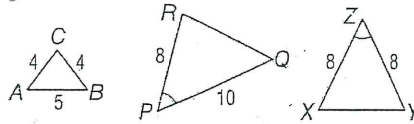
2. **SCHOOL ELECTIONS** Henrietta conducted a random survey of 60 students and found that 36 are planning to vote for her as class president. If there are 460 students in Henrietta's class, predict the total number of students who will vote for her as class president.

$$\frac{5}{3} = \frac{460}{x} \quad x = 276$$

$$\frac{60}{36} = \frac{460}{x}$$

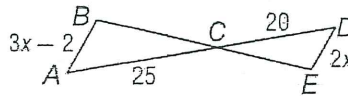
2. x = 276 students

3. Are any two of the three triangles similar? If so, write the appropriate similarity statement.



3. not enough for info

4. If $\triangle ABC \sim \triangle DEC$, find x and the scale factor of $\triangle ABC$ to $\triangle DEC$.



$$\frac{3x-2}{2x} = \frac{25}{20}$$

$$2x(25) = 20(3x-2)$$

$$50x = 60x - 40$$

$$40 = 10x$$

$$4 = x$$

5. **MULTIPLE CHOICE** In a rectangle, the ratio of the length to the width is 5:2, and its perimeter is 126 centimeters. Find the width of the rectangle.

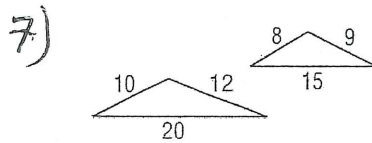
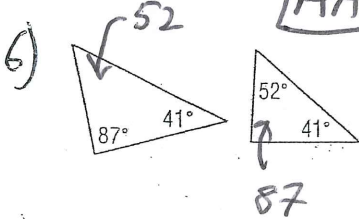
- A 9 cm B 18 cm C 45 cm D 50.4 cm

Chapter 7 Practice

(Lessons 7-3 and 7-4)

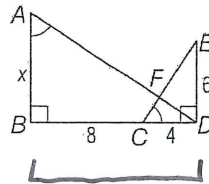
For Questions 1 and 2, determine whether each pair of triangles is similar.

Justify your answer.



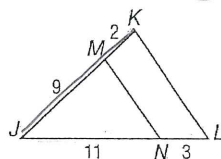
$$\frac{8}{10} = \frac{9}{12} = \frac{15}{20} \quad \text{Not similar}$$

8) Identify the similar triangles in the figure, then find the value of x .



$$\frac{x}{6} = \frac{12}{4} \quad \frac{x}{6} = \frac{3}{1} \quad x = 18$$

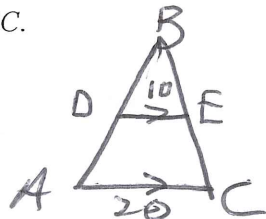
9) Determine whether $\overline{MN} \parallel \overline{KL}$. Justify your answer.



$$\frac{2}{9} = \frac{3}{11}$$

lines Not parallel

10) In $\triangle ABC$, \overline{DE} is parallel to \overline{AC} and $DE = 10$. Find the length of \overline{AC} if \overline{DE} is the midsegment of $\triangle ABC$.



$$AC = 20$$

7 Chapter 7 Vocabulary Review

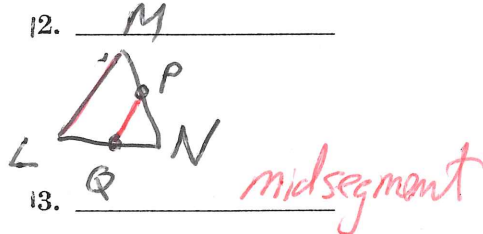
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