

Chapter 7

Indicate the best answer by writing the appropriate letter.

1. If the measures of the angles of a triangle are in the ratio 3:3:4, what is the measure of the largest angle of the triangle?

a. 40 b. 54 c. 72 d. 90

2. If $\triangle ABC \sim \triangle JOT$, which of these is a correct proportion?

a. $\frac{BC}{AC} = \frac{JT}{OT}$ b. $\frac{AB}{JT} = \frac{AC}{JO}$ c. $\frac{AB}{BC} = \frac{OT}{JT}$ d. $\frac{AC}{JT} = \frac{BC}{OT}$

3. If $\frac{a}{b} = \frac{x}{y}$, what does $\frac{y}{b}$ equal?

a. $\frac{x}{a}$ b. $\frac{a}{x}$ c. $\frac{y}{x}$ d. $\frac{b}{y}$

4. $\triangle ABC \sim \triangle DEF$, $AB = 8$, $BC = 12$, $AC = 16$, and $DE = 12$. What is the perimeter of $\triangle DEF$?

a. 36 b. 40 c. 48 d. 54

5. Which of the following pairs of polygons *must* be similar?

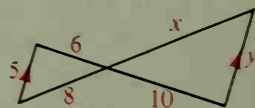
a. two rectangles b. two regular hexagons
c. two isosceles triangles d. two parallelograms with a 60° angle

6. Quad. $GHJK \sim$ quad. $RSTU$, $GH = JK = 10$, $HJ = KG = 14$, and $RS = TU = 16$. What is the scale factor of quad. $GHJK$ to quad. $RSTU$?

a. $\frac{5}{7}$ b. $\frac{5}{8}$ c. $\frac{7}{8}$ d. $\frac{16}{10}$

7. Which of the following can you use to prove that the two triangles are similar?

a. SAS Similarity Theorem b. AA Similarity Postulate
c. SSS Similarity Theorem d. Def. of similar triangles



Exs. 7, 8

8. Which statement is correct?

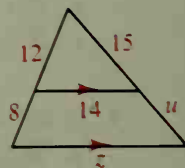
a. $\frac{6}{10} = \frac{8}{x}$ b. $\frac{6}{8} = \frac{x}{10}$ c. $6 \cdot 10 = 8x$ d. $\frac{5}{y} = \frac{8}{10}$

9. What is the value of u ?

a. 8 b. 10 c. 16 d. 25

10. What is the value of z ?

a. 25 b. 28 c. $\frac{28}{3}$ d. $\frac{70}{3}$



Exs. 9, 10

11. In $\triangle APC$, the bisector of $\angle P$ meets \overline{AC} at B . $PA = 30$, $PC = 50$, and $AB = 12$. What is the length of \overline{BC} ?

a. $\frac{36}{5}$ b. 12 c. 20 d. 32

12. If $\triangle RST \sim \triangle XYZ$, what is the ratio of $m\angle S$ to $m\angle Y$?

a. $m\angle R : m\angle Z$ b. 1:1 c. $RS : XY$ d. not enough information