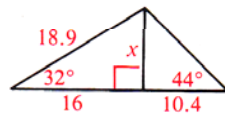


Chapter 8

Indicate the best answer by writing the appropriate letter.

- The shorter leg of a $30^\circ-60^\circ-90^\circ$ triangle has length 7. Find the length of the hypotenuse.
 a. 14 b. $7\sqrt{2}$ c. $7\sqrt{3}$ d. $\sqrt{14}$
- The altitude to the hypotenuse of a right triangle divides the hypotenuse into segments 25 cm and 30 cm long. How long is the altitude?
 a. $15\sqrt{3}$ cm b. $15\sqrt{5}$ cm c. $5\sqrt{30}$ cm d. $5\sqrt{55}$ cm
- The hypotenuse and one leg of a right triangle have lengths 61 and 11. Find the length of the other leg.
 a. 36 b. $5\sqrt{2}$ c. 60 d. $\sqrt{3842}$
- Each side of an equilateral triangle has length 12. Find the length of an altitude.
 a. 6 b. 12 c. $6\sqrt{2}$ d. $6\sqrt{3}$
- One side of a square has length s . Find the length of a diagonal.
 a. $2\sqrt{s}$ b. $s\sqrt{2}$ c. $\frac{s}{2}\sqrt{3}$ d. $s\sqrt{3}$
- What kind of triangle has sides of lengths 12, 13, and 18?
 a. an obtuse triangle b. a right triangle
 c. an acute triangle d. an impossibility
- In $\triangle RST$, $m\angle S = 90$. What is the value of $\sin T$?
 a. $\frac{ST}{RT}$ b. $\frac{RS}{ST}$ c. $\frac{RS}{RT}$ d. $\frac{RT}{RS}$
- What is the geometric mean between 2 and 24?
 a. 48 b. $16\sqrt{3}$ c. $4\sqrt{6}$ d. $4\sqrt{3}$
- One acute angle of a certain right triangle has measure n . If $\sin n^\circ = \frac{3}{5}$, what is the value of $\tan n^\circ$?
 a. $\frac{4}{3}$ b. $\frac{4}{5}$ c. $\frac{3}{4}$ d. $\frac{5}{3}$
- Which equation could be used to find the value of x ?
 a. $\cos 58^\circ = \frac{x}{18.9}$ b. $\sin 32^\circ = \frac{x}{16}$
 c. $\cos 44^\circ = \frac{x}{10.4}$ d. $\tan 46^\circ = \frac{x}{10.4}$
- In rt. $\triangle ABC$, $\overline{AB} \perp \overline{BC}$, $\overline{BD} \perp \overline{AC}$ at point D , $BC = 9$, and $AC = 12$. Find the ratio of AD to DC .
 a. $\frac{9}{16}$ b. $\frac{16}{9}$ c. $\frac{7}{9}$ d. $\frac{9}{7}$
- For what value(s) of x is a triangle with sides of lengths x , $x + 7$, and $x + 8$ a right triangle?
 a. $x = -7$ b. $x = 5$ c. $x = -7$ or $x = 5$ d. $-7 < x < 5$



1)	2)
3)	4)
5)	6)
7)	8)
9)	10)
11)	12)