

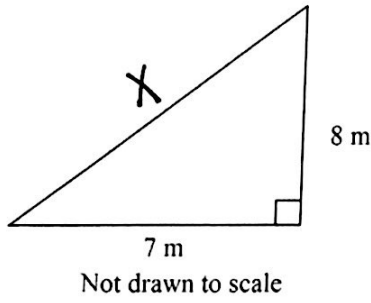
Quiz 1 Review

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Find the length of the missing side. Leave your answer in simplest radical form.

C 1.



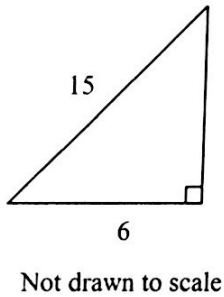
$$7^2 + 8^2 = x^2$$

$$x^2 = 113$$

$$x = \sqrt{113}$$

- a. $\sqrt{17}$ m b. 113 m c. $\sqrt{113}$ m d. $\sqrt{71}$ m

B 2.



$$15^2 = 6^2 + x^2$$

$$225 = 36 + x^2$$

$$x^2 = 189$$

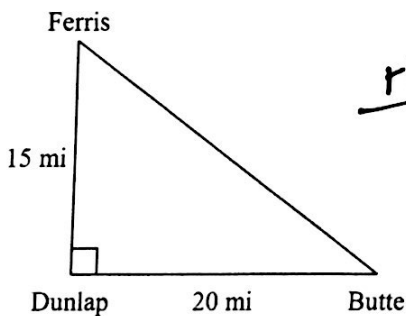
$$x = \sqrt{189}$$

$$\begin{array}{cc} \wedge & \wedge \\ 9 & 21 \\ \wedge & \wedge \\ \textcircled{33} & 73 \end{array}$$

- a. $3\sqrt{29}$ cm b. $3\sqrt{21}$ cm c. $\sqrt{21}$ cm d. 3 cm

C

3. Wayne used the diagram to compute the distance from Ferris to Dunlap to Butte. How much shorter is the distance directly from Ferris to Butte than the distance Wayne found?



$$\frac{15}{+20} \\ \hline 35$$

$$15^2 + 20^2 = x^2$$

$$625 = x^2$$

$$x = \sqrt{625}$$

$$x = 25$$

$$35 - 25 = 10$$

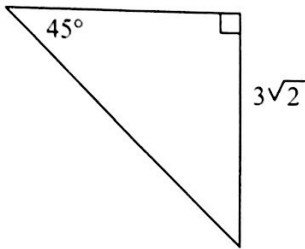
- a. 20 mi b. 25 mi c. 10 mi d. 35 mi

ame: _____

ID: A

B

4. Find the length of the hypotenuse.



$$3\sqrt{2} \cdot \sqrt{2}$$

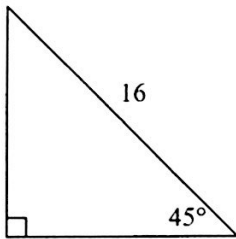
$$3\sqrt{4}$$

$$3(2)$$

- a. 12 b. 6 c. 5 d. 18

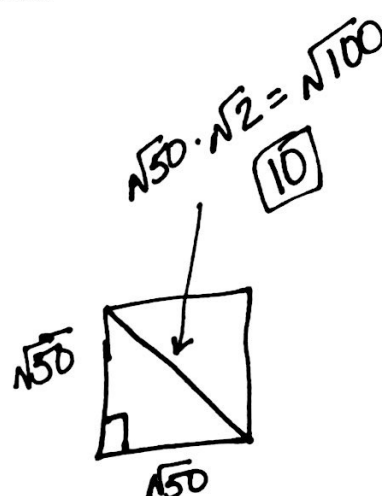
$\frac{16}{\sqrt{2}}$

5. Find the length of the leg. If your answer is not an integer, leave it in simplest radical form.



Not drawn to scale

- ~~a. 128 b. $8\sqrt{2}$ c. 16 d. $2\sqrt{2}$~~



D

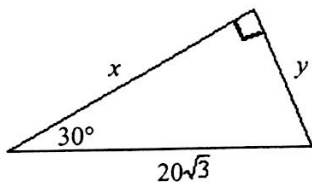
6. The area of a square garden is 50 m². How long is the diagonal?

- a. 25 m b. 100 m c. $5\sqrt{6}$ m d. 10 m

Find the value of the variable(s). If your answer is not an integer, leave it in simplest radical form.

D

7.



Not drawn to scale

- a. $x = 10\sqrt{3}, y = 30$ c. $x = 30\sqrt{3}, y = 10$
 b. $x = 10, y = 30\sqrt{3}$ d. $x = 30, y = 10\sqrt{3}$

$$y = \frac{20\sqrt{3}}{2}$$

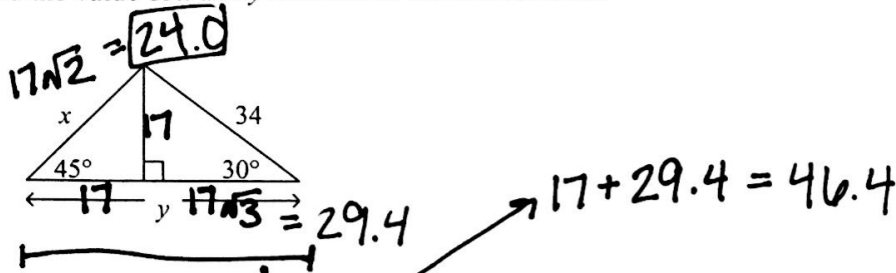
$$y = 10\sqrt{3}$$

$$x = 10\sqrt{3} \cdot \sqrt{3}$$

$$x = 10\sqrt{9}$$

$$x = 30$$

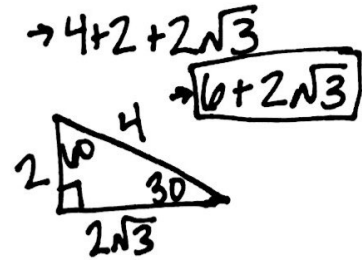
- D 8. Find the value of x and y rounded to the nearest tenth.



- a. $x = 48.1, y = 46.4$
 b. $x = 48.1, y = 139.3$
 c. $x = 24.0, y = 139.3$
 d. $x = 24.0, y = 46.4$

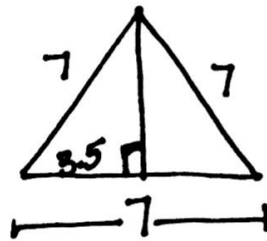
- B 9. The length of the hypotenuse of a $30^\circ-60^\circ-90^\circ$ triangle is 4. Find the perimeter.

- a. $4 + 12\sqrt{3}$
 b. $6 + 2\sqrt{3}$
 c. $2 + 6\sqrt{3}$
 d. $12 + 4\sqrt{3}$



- D 10. A piece of art is in the shape of an equilateral triangle with sides of 7 in. Find the area of the piece of art. Round your answer to the nearest tenth.

- a. none of these b. 42.4 in^2 c. 17.3 in^2 d. 21.2 in^2



~~700~~
 $7^2 = 3.5^2 + x^2$
 $49 = 12.25 + x^2$
 $-12.25 - 12.25$
 $36.75 = x^2$
 $x = \sqrt{36.75}$
 $x = 6.06$

$A = \frac{1}{2}(7)(6.06)$
 ~~$A = 21.2 \text{ in}^2$~~
 $A = 21.2 \text{ in}^2$