

WARMUP

NONE

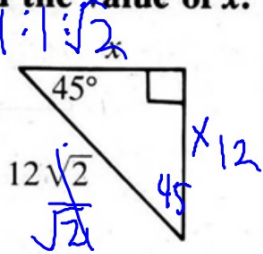
PROOF QUIZ

SECTION 8.4:
SPECIAL RIGHT TRIANGLES
DAY 2

Standards:

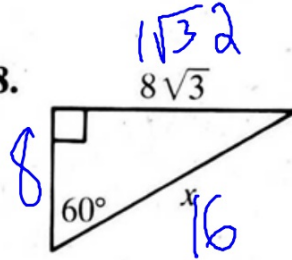
Find the value of x.

17.



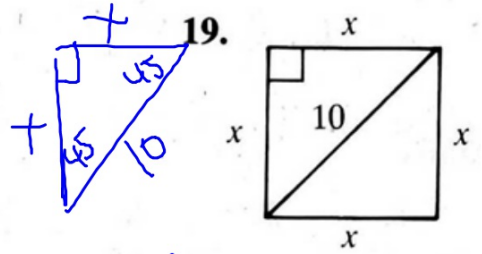
$$\begin{aligned}
 x^2 + x^2 &= 12\sqrt{2}^2 \\
 x^2 + x^2 &= 288 \quad 144 \\
 2x^2 &= 288 \quad 2 \\
 x^2 &= 144 \\
 x &= 12
 \end{aligned}$$

18.



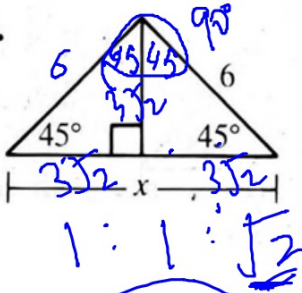
$$\begin{aligned}
 & \frac{10\sqrt{2}}{2\sqrt{2}\sqrt{2}} \\
 & 5\sqrt{2}
 \end{aligned}$$

19.



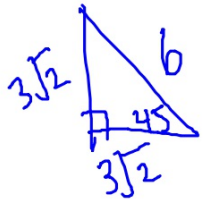
$$\begin{aligned}
 x^2 + x^2 &= 10^2 \\
 2x^2 &= 100 \\
 x^2 &= 50 \\
 x &= \sqrt{50} \\
 &= 5\sqrt{2}
 \end{aligned}$$

20.



1:1:√2

★ $6\sqrt{2}$

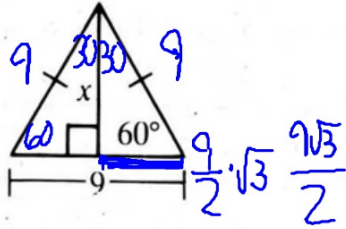


$\frac{6\sqrt{2}}{2\sqrt{2}\sqrt{2}}$

$3\sqrt{2}$



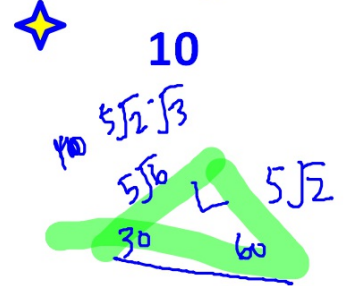
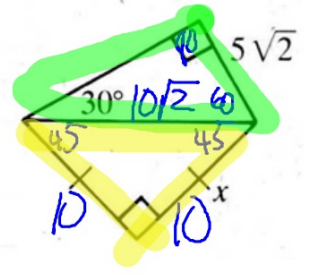
21.



★ $\frac{9\sqrt{3}}{2}$

9

22.

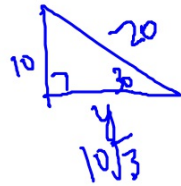
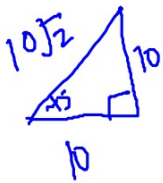
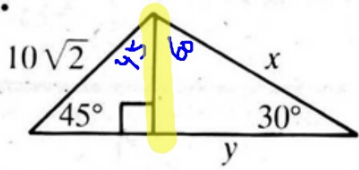


$10\sqrt{2}$

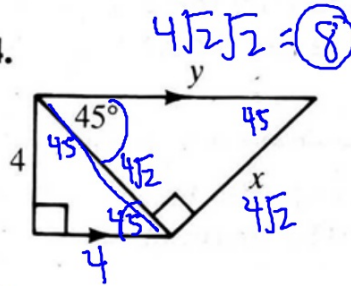


Find the values of x and y .

23.



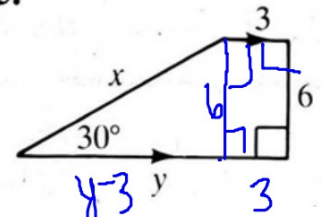
24.



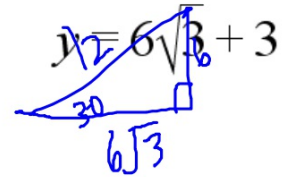
① $\sqrt{3}$ ②

$y = 6\sqrt{3} + 3$

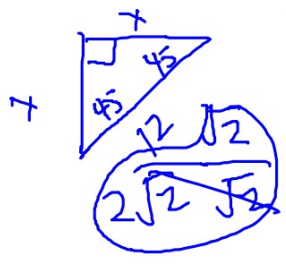
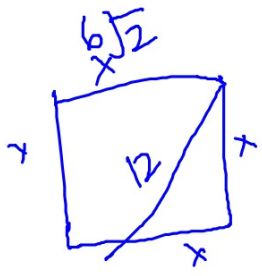
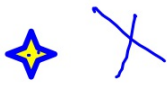
25.



$x = 12$



26) Find the perimeter of a square if a diagonal has length 12.



$$\frac{12\sqrt{2}}{2} = 6\sqrt{2}$$

27) Find the perimeter of an equilateral triangle if an altitude has length $7\sqrt{3}$.



$$\frac{\sqrt{3}}{3}$$

$$\frac{2\sqrt{3}\sqrt{3}}{3}$$

HOMEWORK

$$\frac{\sqrt{3}\sqrt{2}}{\sqrt{2}\sqrt{2}} \quad \frac{\sqrt{6}}{2}$$

Assignment #8.4b



- Page 293 #33, 34 (8.2 notes if need help)
- Pages 302-303 #19-26, 32-34
- WS: Converse of Pythagorean Thm; Speical Right Triangles (#1-13 odd, 15-20)

$$\frac{10\sqrt{2}}{2\sqrt{2}\sqrt{2}} \quad 5\sqrt{2}$$

****TUESDAY FEB 7th - QUIZ 8.1-8.4****

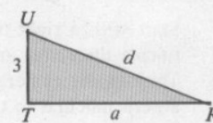
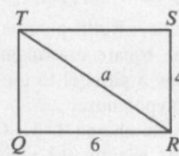
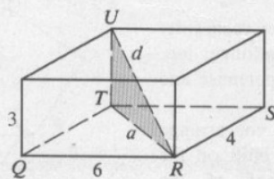
****TUESDAY FEB 14th - CH 8 QUIZ****

****THURSDAY FEB 16th - TEST CH 8****

In Exercises 33–36 the dimensions of a rectangular box are given. Sketch the box and find the length of a diagonal of the box.

Example Dimensions 6, 4, 3

Solution



$$\begin{aligned} a^2 &= 6^2 + 4^2 \\ a^2 &= 36 + 16 \\ a^2 &= 52 \end{aligned}$$

$$\begin{aligned} d^2 &= a^2 + 3^2 \\ d^2 &= 52 + 9 \\ d^2 &= 61 \\ d &= \sqrt{61} \end{aligned}$$

33. 12, 4, 3

34. 5, 5, 2

35. e, e, e

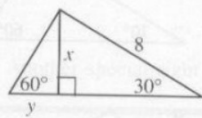
36. l, w, h

19. An altitude of an equilateral triangle has length $6\sqrt{3}$. What is the perimeter of the triangle?

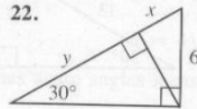
20. Find the altitude of an equilateral triangle if each side is 10 units long.

Find the values of x and y in each diagram.

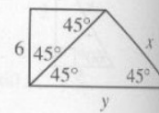
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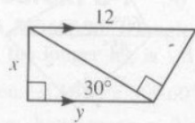
22.



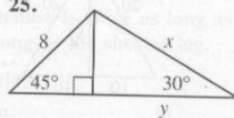
23.



24.



25.



26.

