

1. Between which two consecutive integers is $\sqrt{18}$? 2. Between which two consecutive integers is $\sqrt{59}$?
Between 4 & 5 ^{4.24} Between 7 & 8 ^{7.6}

Simplify:

3. $\sqrt{121}$ 4. $\sqrt{68+13}$ 5. $-\sqrt{100}$ 6. $\sqrt{-64}$ 7. $-\sqrt{64}$ 8. $\sqrt{\frac{16}{25}}$ 9. $\frac{\sqrt{1}}{\sqrt{4}}$ 10. $\sqrt[3]{1331}$
 11 $\sqrt{81}$ -10 NO solution -8 $\frac{4}{5}$ $\frac{1}{2}$ 11
 9

11. What is the slope the given line: $3x + 2y = 8$

$$\begin{array}{r} -3x \quad -3x \\ \hline 2y = -3x + 8 \\ \frac{2y}{2} = \frac{-3x}{2} + \frac{8}{2} \end{array}$$

$$y = -\frac{3}{2}x + 4$$
 Slope = $-\frac{3}{2}$

SOLVE:

12. $5x + 6 = 5x - 3$

$$\begin{array}{r} -5x \quad -5x \\ \hline 6 = -3 \\ \emptyset \end{array}$$
13. $4(x - 4) = 4x - 16$

$$\begin{array}{r} 4x - 16 = 4x - 16 \\ -4x \quad -4x \\ \hline -16 = -16 \\ R \end{array}$$
14. $5 + 8 = \frac{x}{4} + 15$

$$\begin{array}{r} 13 = \frac{x}{4} + 15 \\ -15 \quad -15 \\ \hline (4)-2 = \frac{x}{4} \\ x = -8 \end{array}$$

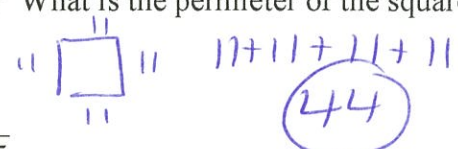
15. What is the complement of 62° ? 90

$$\begin{array}{r} 90 \\ -62 \\ \hline 28 \end{array}$$
16. What is the supplement of 45° ? 135

$$\begin{array}{r} 180 \\ -45 \\ \hline 135 \end{array}$$

17. What is the length of the side of a square that has an area of 121 cm^2 ? What is the perimeter of the square?

$$\sqrt{121} = 11$$

$$S = 11$$


18. Place the following in order from least to greatest: $1, \sqrt{2}, 3, \sqrt{4}, \sqrt{5}$

$$1, \sqrt{2}, \sqrt{4}, \sqrt{5}, 3$$

In #20-29, determine if the numbers are rational or irrational

19. 0.16 20. .272727... 21. .375 22. .48732... 23. 1.232332333...
 R R R I I
24. 1.232232223 25. $\sqrt{25}$ 26. $\sqrt{37}$ 27. 2π 28. $\frac{3}{4}$ R

29. What is $\sqrt{42}$ rounded to the nearest tenth? 30. What is $\sqrt[3]{42}$ rounded to the nearest hundredth?
 6.5 3.5

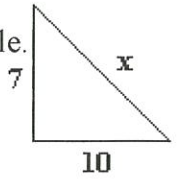
31. Compare using $<$ $>$ or $=$: $\sqrt{4.6}$ $<$ 2.5
 2.1

32. Express in Scientific Notation

$(2.7 \times 10^4)(7.5 \times 10^7)$

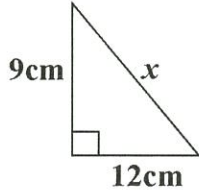
$20,25 \times 10^{11}$
 2.025×10^{12}

33. Solve for x in the following triangle. Round to the nearest tenth.



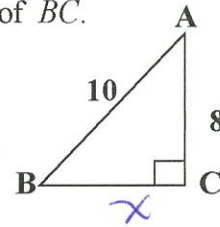
$a^2 + b^2 = c^2$
 $7^2 + 10^2 = x^2$
 $49 + 100 = x^2$
 $\sqrt{149} = \sqrt{x^2}$
 $x = 12.2$

34. Solve the missing side of the given right triangle.



$a^2 + b^2 = c^2$
 $9^2 + 12^2 = x^2$
 $81 + 144 = x^2$
 $\sqrt{225} = \sqrt{x^2}$
 $x = 15$

35. Find the length of \overline{BC} .



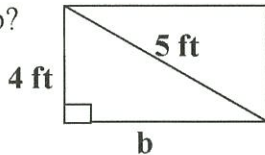
$a^2 + b^2 = c^2$
 $x^2 + 8^2 = 10^2$
 $x^2 + 64 = 100$
 $-64 \quad -64$
 $\sqrt{x^2} = \sqrt{36}$
 $x = 6$

36. Express in Scientific Notation: $(3.5 \times 10^5) + (7.3 \times 10^4)^1$

$(3.5 \times 10^5) + (.73 \times 10^5)$
 4.23×10^5

37. a) What is the measure of b ?

$b = 3$



$a^2 + b^2 = c^2$
 $4^2 + x^2 = 5^2$
 $16 + x^2 = 25$
 $-16 \quad -16$
 $\sqrt{x^2} = \sqrt{9}$
 $x = 3$

b) What is the perimeter of the rectangle? $4 + 4 + 3 + 3$

(14)

c) What is the area of the rectangle? $4(3)$

(12)

Prove whether the following can be the sides of a right triangle:

38. 8, 15, and 17

$a \quad b \quad c$

$8^2 + 15^2 = 17^2$
 $289 = 289$ yes

39. 12, 14, and 16

$a \quad b \quad c$

$12^2 + 14^2 = 16^2$
 $340 = 256$ NO

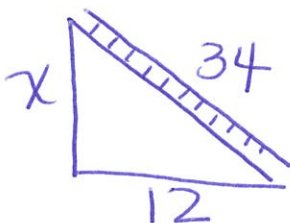
40. 5, 3, and 4

$c \quad a \quad b$

$3^2 + 4^2 = 5^2$
 $25 = 25$ yes

Draw a picture and solve the following word problem:

41. The base of a 34 foot ladder is placed 12 feet from a building. How high above the ground is the top of the ladder? Round your answer to the nearest whole number.



$a^2 + b^2 = c^2$
 $x^2 + 12^2 = 34^2$
 $x^2 + 144 = 1156$
 $-144 \quad -144$
 $\sqrt{x^2} = \sqrt{1012}$
 $x = 31.811$

$x = 32$