

Summer work - 8th Grade Pre Algebra. All work must be shown neatly!

Evaluate each expression.

1) $2 - \left(-\frac{1}{2}\right)$

2) $(-2) - \left(-2\frac{1}{6}\right)$

3) $\left(-2\frac{1}{5}\right) - 4\frac{3}{7}$

4) $4\frac{1}{2} - \frac{1}{8}$

5) $\frac{1}{6} - \left(-\frac{5}{8}\right)$

6) $\left(-\frac{2}{5}\right) - \left(-\frac{3}{4}\right)$

7) $(-2) - \left(-3\frac{3}{7}\right)$

8) $2\frac{7}{8} + \left(-1\frac{1}{8}\right)$

9) $1 - 3\frac{5}{8}$

10) $\left(-\frac{4}{5}\right) + \left(-\frac{6}{7}\right)$

11) $(3 - 5) \cdot 5$

12) $(-3 - 4)^2$

13) $\frac{16}{-5 + 1}$

14) $\frac{5 \cdot 2}{-5}$

15) $(-5 - 5) \cdot 6$

16) $2^2 \cdot 2$

17) $2 \cdot -3 - 2$

18) $\frac{2 + 6}{4}$

19) $(3 - 4) \cdot -5$

20) $(2 + 2) \cdot 6$

21) $5 + \frac{3}{3}$

22) $-6 - 4 + 3$

23) $\frac{12 + 3}{-5}$

24) $3 + 2 - 1$

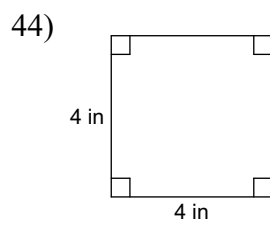
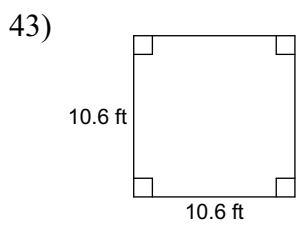
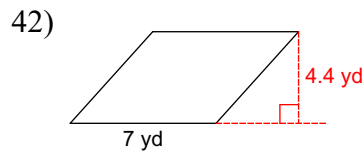
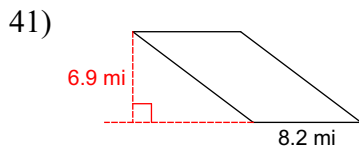
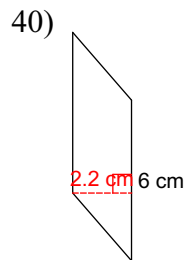
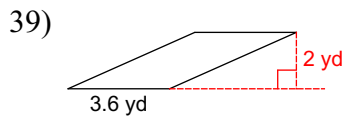
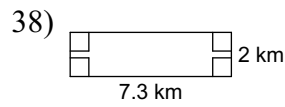
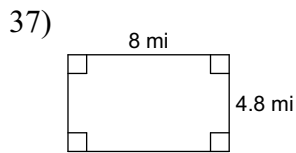
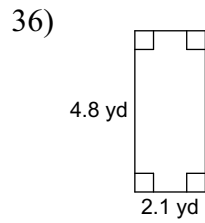
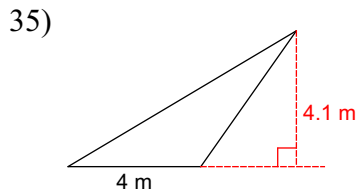
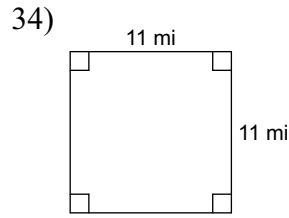
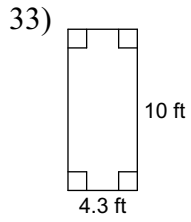
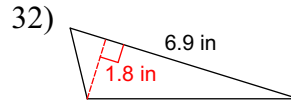
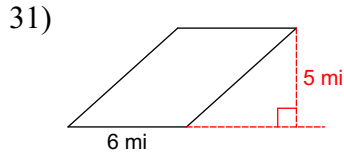
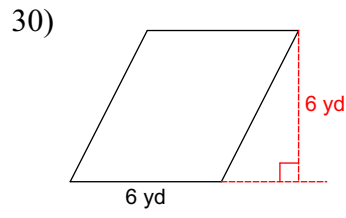
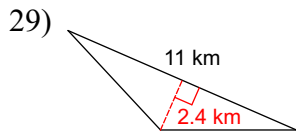
25) $3 - (2 - -2)$

26) $\frac{10}{-5} - 6$

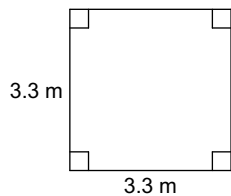
27) $\left(\frac{18}{-6}\right)^2$

28) $2 \cdot 4 - -5$

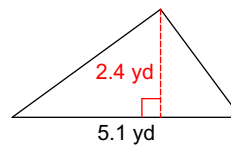
Find the area of each.



45)



46)



Evaluate each using the values given.

47) $n - 3 + m$; use $m = -5$, and $n = 4$

49) $(b + a)^2$; use $a = -6$, and $b = 1$

51) $pm + m$; use $m = -3$, and $p = 4$

53) $x(y + y)$; use $x = 5$, and $y = 6$

55) $y(y - x)$; use $x = 2$, and $y = -2$

48) y^2x ; use $x = -2$, and $y = -4$

50) $a \times b \div 3$; use $a = 2$, and $b = -3$

52) y^2x ; use $x = -1$, and $y = -2$

54) $p + 5 + m$; use $m = -5$, and $p = 2$

56) $x + x - z$; use $x = -2$, and $z = -6$

Find the LCM of each. (Least common Multiple)

57) 20, 15

59) 30, 22

61) 16, 34

63) 12, 18

65) 28, 12

58) 16, 24

60) 35, 25

62) 35, 28

64) 12, 32

66) 18, 27

Find each product.

67) $-5 \cdot 3 \cdot -9$

69) $-7 \cdot 6 \cdot -4$

71) $8 \cdot -4 \cdot 2$

73) $3 \cdot 6 \cdot -7$

75) $-8 \cdot -4 \cdot 3$

68) $-4 \cdot -1 \cdot -10$

70) $-2 \cdot -3 \cdot -9$

72) $8 \cdot 9 \cdot -6$

74) $-8 \cdot -6 \cdot 10$

76) $10 \cdot -5 \cdot -9$

Simplify each expression.

77) $5(x + 8)$

79) $4(-9 - 8x)$

78) $-10(1 + 3n)$

80) $10(1 - 10x)$

81) $-2(6 - 5n)$

82) $-2(6n - 1)$

83) $5(9 - 5r)$

84) $3(-4k + 6)$

85) $4(1 + 8n)$

86) $-10(1 - 8n)$

87) $-3(3m - 8)$

88) $7(5a - 5)$

Answer each question and round your answer to the nearest whole number.

89) A rectangle is 12 in wide and 18 in tall. If it is reduced to a height of 3 in, then how wide will it be?

90) If you can buy one bunch of asparagus for \$2, then how many can you buy with \$6?

91) If you can buy one seedless watermelon for \$2, then how many can you buy with \$10?

92) Ming was planning a trip to Poland. Before going, she did some research and learned that the exchange rate is 3 Zlotych for every \$1. How many Zlotych would she get if she exchanged \$5?

93) If you can buy one seedless watermelon for \$2, then how many can you buy with \$4?

94) Jasmine bought one jar of crushed ginger for \$2. How many jars can Anjali buy if she has \$4?

95) Scott was planning a trip to Peru. Before going, he did some research and learned that the exchange rate is \$1 to 3 Nuevos Soles. How many Nuevos Soles would he get if he exchanged \$4?

96) Beth enlarged the size of a frame to a width of 6 in. What is the new height if it was originally 1 in tall and 2 in wide?

97) Mark took a trip to Sweden. Upon leaving he decided to convert all of his Kronor back into dollars. How many dollars did he receive if he exchanged 14 Kronor at a rate of 7 Kronor for \$1?

98) A rectangle is 2 in wide and 3 in tall. If it is enlarged to a width of 10 in, then how tall will it be?

Solve each proportion. Leave as reduced improper fraction

99) $\frac{n}{6} = \frac{9}{3}$

100) $\frac{3}{v} = \frac{2}{4}$

101) $\frac{n}{4} = \frac{4}{5}$

102) $\frac{10}{9} = \frac{k}{8}$

103) $\frac{x}{9} = \frac{6}{4}$

104) $\frac{7}{5} = \frac{5}{x}$

105) $\frac{4}{9} = \frac{x}{6}$

106) $\frac{5}{7} = \frac{b}{6}$

107) $\frac{3}{p} = \frac{7}{5}$

108) $\frac{3}{2} = \frac{7}{x}$

State if each pair of ratios forms a proportion.

109) $\frac{12}{6}$ and $\frac{4}{2}$

110) $\frac{9}{6}$ and $\frac{3}{2}$

111) $\frac{8}{4}$ and $\frac{4}{2}$

112) $\frac{12}{10}$ and $\frac{3}{2}$

113) $\frac{4}{2}$ and $\frac{24}{8}$

114) $\frac{3}{4}$ and $\frac{9}{20}$

115) $\frac{2}{4}$ and $\frac{4}{12}$

116) $\frac{10}{16}$ and $\frac{2}{4}$

Solve each equation.

117) $9 = \frac{m}{3} + 4$

118) $1 + \frac{r}{10} = -1$

119) $-9 - 9n = -45$

120) $-134 = 10 - 9n$

121) $\frac{a}{4} + 4 = 6$

122) $7m + 6 = 146$

123) $-3 = \frac{n}{2} - 6$

124) $\frac{k}{2} + 1 = -1$

125) $4x + 3 = -9$

126) $-6 + \frac{x}{2} = -4$

127) $15 = \frac{b}{2} + 6$

128) $-115 = 7x - 10$

129) $-5 = -3 + \frac{a}{4}$

130) $-8 + \frac{r}{4} = -4$

131) $0 = -1 + \frac{p}{8}$

132) $-1 + \frac{x}{5} = 1$

133) $159 = -1 - 8n$

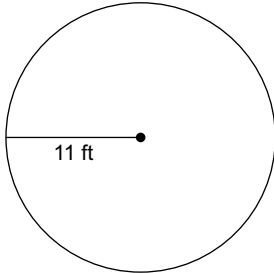
$$134) 2 + \frac{m}{9} = 4$$

$$135) -6n + 3 = 3$$

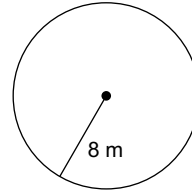
$$136) 4 + 5r = 104$$

Find the area of each. Round your answer to the nearest tenth.

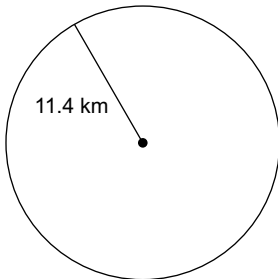
137)



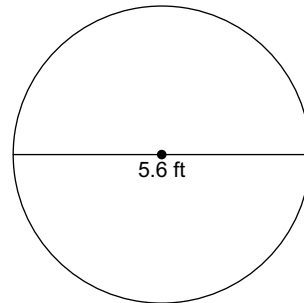
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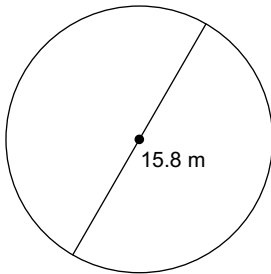
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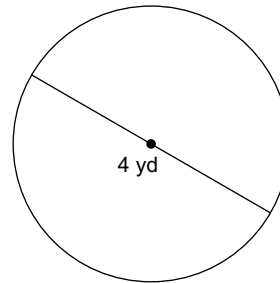
140)



141)



142)



143) radius = 11 ft

144) radius = 4 km

145) radius = 6 cm

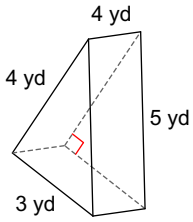
146) diameter = 4 km

147) diameter = 12 km

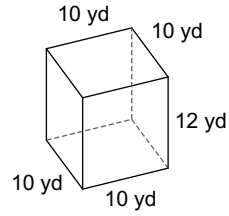
148) diameter = 17.4 km

Find the volume of each figure. Round to the nearest tenth.

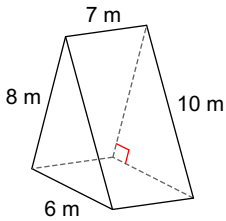
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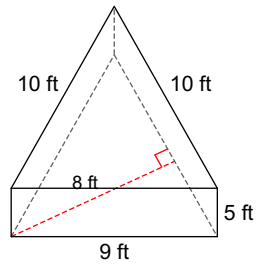
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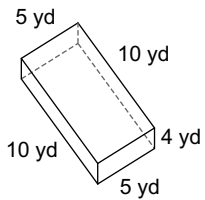
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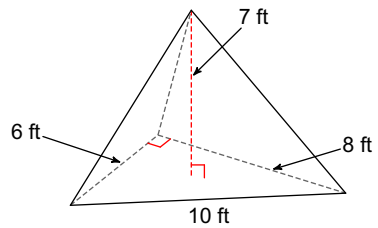
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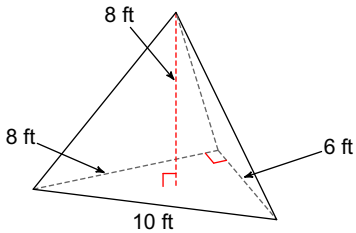
153)



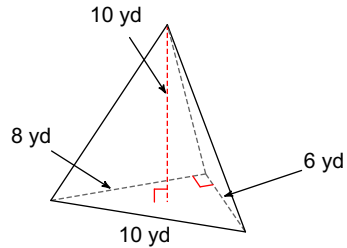
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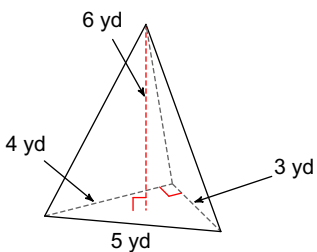
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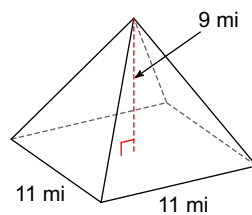
156)



157)



158)



Solve each problem.

159) 35% of 9 is what?

160) 340% of 27 is what?

161) What percent of 160 is 78?

162) 76 is what percent of 155?

163) 17 is 210% of what?

164) 17 is what percent of 106?

165) What is 62% of 79?

166) 77% of what is 144.7?

167) 124 is 6% of what?

168) 129 is 6% of what?

Write each as a fraction.

169) 20%

170) $64.\overline{64}\%$

171) 42.4%

172) $5.\overline{05}\%$

173) $66.\overline{6}\%$

174) $55.\overline{5}\%$

175) 40%

176) 50%

177) 12%

178) 4%

Solve each equation.

179) $17 = \frac{k}{14}$

180) $2 = v - 9$

181) $\frac{8}{3} = \frac{p}{6}$

182) $-2 = \frac{m}{14}$

183) $\frac{n}{8} = -7$

184) $-15 = -5 + x$

185) $-3 = \frac{k}{12}$

186) $-3 = \frac{n}{17}$

187) $p - 14 = -21$

188) $-\frac{7}{11} = \frac{p}{11}$

189) $\frac{5}{6} = \frac{b}{12}$

190) $-130 = 13x$

191) $16m = 48$

$$192) -\frac{2}{5} = \frac{b}{15}$$

$$193) x - 8 = -10$$

$$194) -169 = -13n$$

$$195) -6m = 18$$

$$196) -15 = x - 11$$

$$197) -18 = \frac{b}{9}$$

$$198) -21 = x - 15$$