

Sagemont Preparatory School**Solve each equation for the indicated variable.**

1) $m - x = n + p$, for x

2) $ac = \frac{r}{d}$, for a

3) $\frac{k}{x} = w + v$, for x

4) $z = ymx$, for x

5) $g = a + c - b$, for a

6) $cx = d + r$, for x

Simplify each expression.

7) $9a + 2a$

8) $-4n + 2 + 9 + 3n$

9) $-7 - 4r - 3r$

10) $-8a - 2a$

11) $-6(7 + 3x)$

12) $5(b + 3)$

13) $3 + 2(k + 6)$

14) $v + 2(1 + 4v)$

15) $-1 + 3(n - 6)$

16) $-7 - 2(9x - 9)$

17) $3.8(9.771a - 9.3)$

18) $-7.9(9.7 + 7.872k)$

Solve each equation by factoring.

19) $a^2 - 5a = -6$

20) $n^2 - 8n = -15$

21) $x^2 - 12 = 4x$

22) $b^2 = b$

Factor the common factor out of each expression.

23) $-30x^4 - 5x^2 + 10x$

24) $-90a + 10a^2 - 90a^7$

Find each product.

25) $(7m + 7)(2m - 2)$

26) $(7x + 7)(7x + 6)$

Simplify.

27) $\sqrt{10}(2\sqrt{3} + \sqrt{2})$

28) $-3\sqrt{15}(\sqrt{10} + 2\sqrt{3})$

29) $\sqrt{180n^3}$

30) $\sqrt{320x}$

31) $\sqrt{125a^3}$

32) $\sqrt{144k^4}$

33) $-\sqrt{18} - 3\sqrt{2}$

34) $-2\sqrt{18} + 2\sqrt{2}$

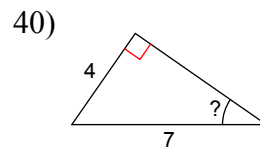
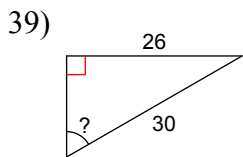
35) $\frac{5\sqrt{3}}{3\sqrt{5}}$

36) $\frac{\sqrt{2}}{\sqrt{5}}$

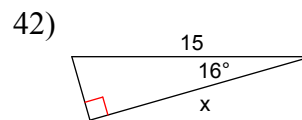
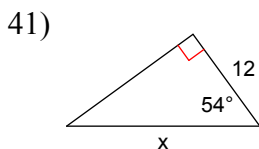
37) $\frac{5}{5\sqrt{3}}$

38) $\frac{3}{\sqrt{3}}$

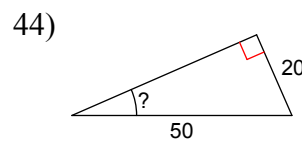
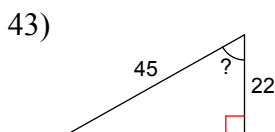
Find the measure of the indicated angle to the nearest degree.



Use the Pythagorean Theorem to find the missing size. Round to the nearest tenth.



Use trigonometric ratios to find the measure of the indicated angle to the nearest degree.



Solve each equation for the given variable.

45) $-8 + \frac{m}{2} = -16$

46) $-4 - 4n = -80$

47) $-8 - 9n = -179$

48) $\frac{x+8}{5} = 3$

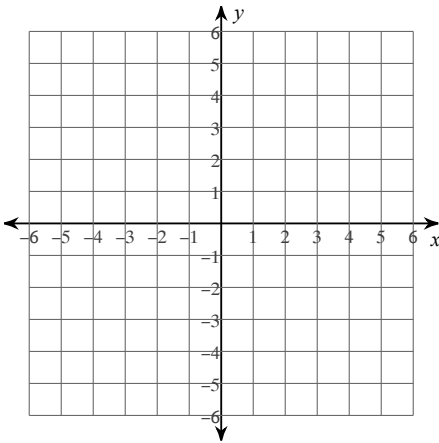
Solve each equation.

49) $83 = 3(3x + 6) - 7$

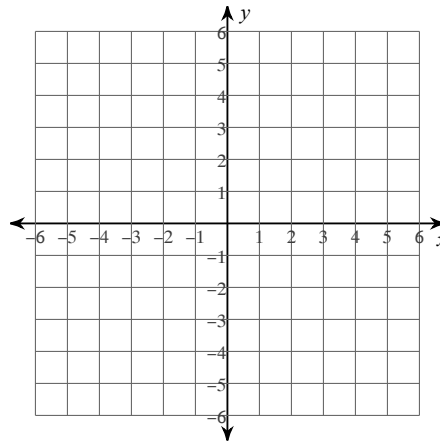
50) $5(2 + 5x) - 7x = -134$

Sketch the graph of each line.

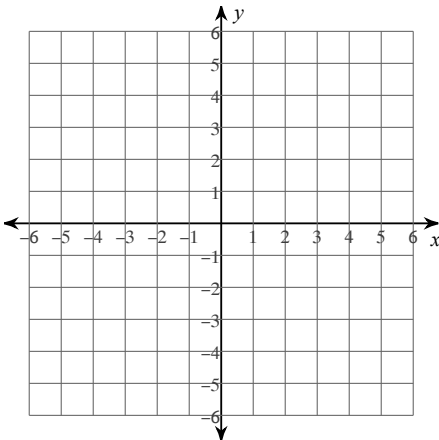
51) $y = 1$



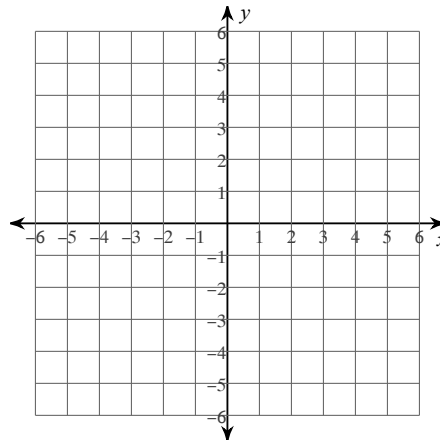
52) $y = x - 3$



53) x -intercept = -4 , y -intercept = 5



54) x -intercept = 5 , y -intercept = -2



Evaluate each expression.

55) $5 - 1$

56) $(-1) - 1$

57) $(-1) + 6$

58) $5 + (-1)$

59) $1 - (-7)$

60) $(-7) - (-1)$

Find each product.

61) $(-4)(5)$

62) $(7)(-1)$

Find each quotient.

63) $\frac{27}{9}$

64) $\frac{-27}{-9}$

Evaluate each expression.

65) $5 - 4 + 6$

66) $5 \times 2 \times 3$

67) $(3 - 2)^2$

68) $4 + 2 - 3$

Find the distance between each pair of points.

69) $(-4, -3), (-5, -2)$

70) $(-7, 7), (5, -8)$

71) $(-8, -8), (-2, -3)$

72) $(0, -4), (-3, -5)$

Evaluate each using the values given.

73) $rq \div 6$; use $q = 6$, and $r = 3$

74) $3p - q$; use $p = 3$, and $q = 4$

Simplify. Your answer should contain only positive exponents.

75) $4u^3 \cdot 3u^3v^0$

76) $2y^0 \cdot x^2y^{-3}$

77) $(3x^3)^{-4}$

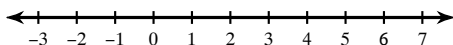
78) $(ba^3)^2$

79) $\frac{4yx^4}{4x^{-3}y^3}$

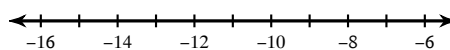
80) $\frac{4x^3y^0}{2yx^4}$

Solve each inequality and graph its solution.

81) $7 > 6 + \frac{r}{4}$



82) $-57 < -3 + 6x$



Find the value of x or y so that the line through the points has the given slope.

83) $(-2, 1)$ and $(-6, y)$; slope: 2

84) $(x, -6)$ and $(-7, 3)$; slope: $-\frac{9}{8}$

85) $(x, 3)$ and $(-6, -2)$; slope: -5

86) $(-6, y)$ and $(3, -6)$; slope: $\frac{1}{9}$

Find the slope of a line perpendicular to each given line.

87) $y = x + 4$

88) $y = 4$

89) $y = x + 5$

90) $y = -7x - 3$

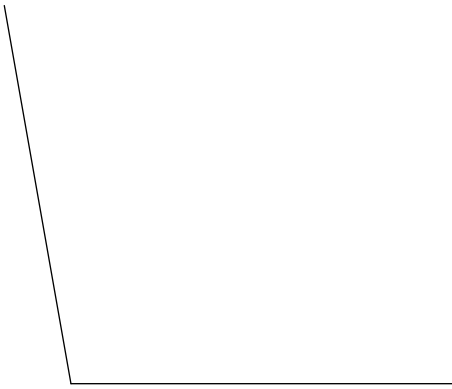
Find the slope of a line parallel to each given line.

91) $y = -2x + 5$

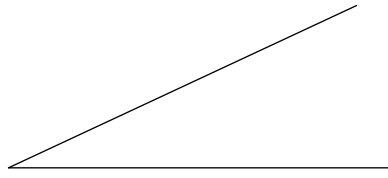
92) $y = -2x - 4$

Find the measure of each angle to the nearest degree.

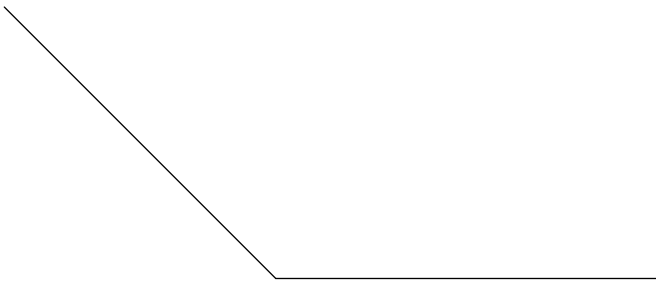
1)



2)

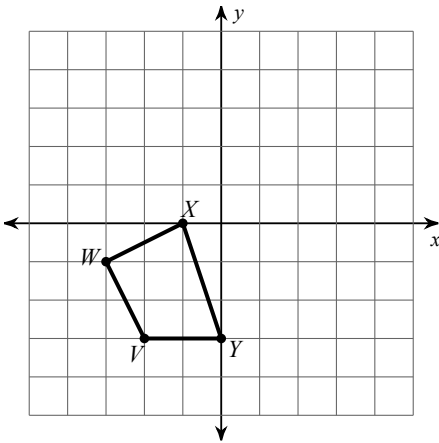


3)

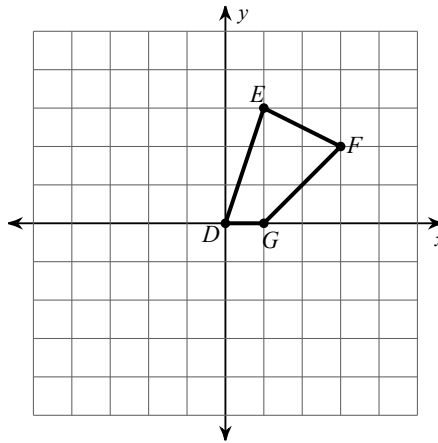


Graph the image of the figure using the transformation given.

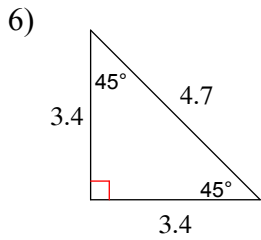
4) reflection across the y-axis



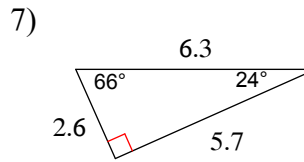
5) reflection across the y-axis



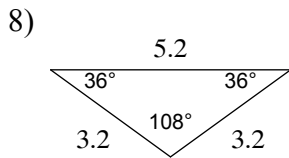
Classify each triangle by its angles and sides.



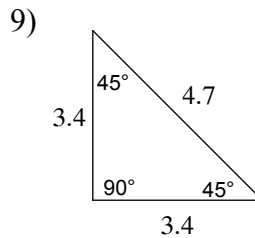
- A) obtuse scalene
- B) right scalene
- C) acute obtuse
- D) right isosceles



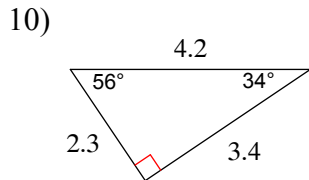
- A) scalene isosceles
- B) acute scalene
- C) right scalene
- D) acute isosceles



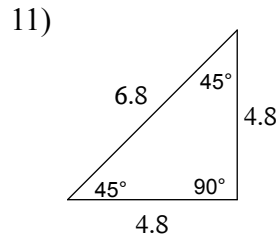
- A) obtuse scalene
- B) obtuse isosceles
- C) acute scalene
- D) right isosceles



- A) acute scalene
- B) acute isosceles
- C) acute right
- D) right isosceles

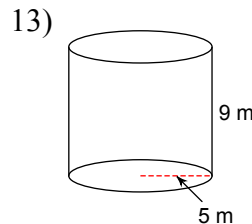
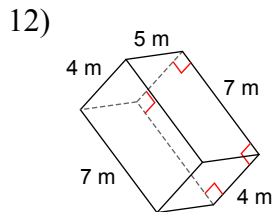


- A) right isosceles
- B) right scalene
- C) equilateral
- D) acute isosceles



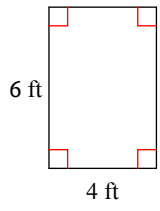
- A) acute scalene
- B) obtuse isosceles
- C) acute isosceles
- D) right isosceles

Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

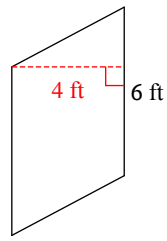


Find the area of each.

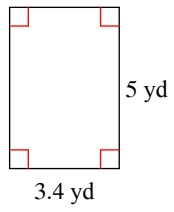
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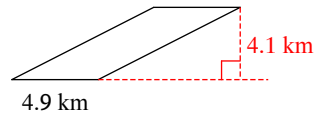
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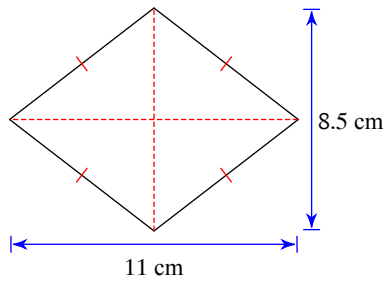
16)



17)



18)



19)

