

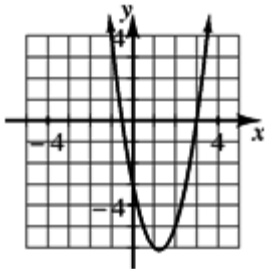
4-58. See below.

a. $\frac{10}{20} = \frac{1}{2}$

b. $\frac{9}{19}$

c. No, they are not independent. The probability the second contestant is a girl depends on whether the first contestant was a girl or not.

4-59. See graph below.



a. $(-\frac{1}{2}, 0)$ and $(3, 0)$

b. $x = -\frac{1}{2}$ or $x = 3$; Yes.

4-60. See below.

a. Slope = $\frac{1}{2}$

b. It must be parallel to or coincide with the line graphed at right.

4-61. Francis: $y = x + 2$, John: $y = \frac{3}{4}x + 5$; 12 seconds

4-62. See below.

a. $x \approx 2.344$

b. $x \approx 0.667$

c. $x = 1.5$ or -5

d. No real solution

4-63. leg ≈ 29.44 cm, hypotenuse ≈ 30.78 cm, so the perimeter ≈ 69.22 cm