8. The legs of a right triangle measure 14 and 25. To the nearest tenth of a degree, what is the measure of the angle opposite the shortest side?

a. 29.2°
b. 34.1°
c. 55.9°
d. 60.8°

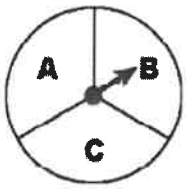
13. A camera is mounted at a point 4,400 ft from the base of a rocket launching pad. Assuming the rocket rises vertically, what is the height of the rocket from its base when the camera angle is 30°? Round your answer to the nearest foot.

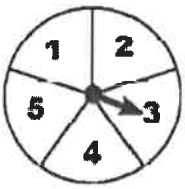
a. 3,811 ft
b. 2,540 ft
c. 7,621 ft
d. 2,200 ft

A bag contains hair ribbons for a spirit rally. The bag contains 5 black ribbons and 7 green ribbons. Lila selects a ribbon at random. then Jessica selects a ribbon at random from the remaining ribbons. Find the probability that both events A and B occur. Express your answer as a fraction in simplest form.
Event A: Lila selects a black ribbon.
Event B: Jessica selects a green ribbon.

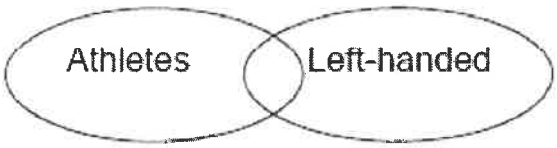
A movie company surveyed 1000 people. 229 people said they went to see the new movie on Friday. 256 said they went on Saturday. If 24 people saw the movie both nights, what is the probability that a person chosen at random saw the movie on Friday or Saturday?

Find the probability of getting the results shown on the spinners. Express your answer as a fraction in simplest form.





Of 50 students going on a class trip, 35 are student athletes and 5 are left-handed. Of the student athletes, 3 are left-handed. Which is the probability that one of the students on the trip is an athlete or is left-handed?



The table shows the results of a survey of students in two math classes.
Find P(more than 1 hour of TV | 6th period class). Round to the nearest thousandth.

Did You Watch More Than One Hour of TV Last Night?

	Yes	No
3rd period class	11	6
6th period class	13	10

The roots of the equation $2x^2\ 7x - 3 = 0$ are

A. $-\frac{1}{2}$ and -3

B. $\frac{1}{2}$ and 3

C. $\frac{-7 \pm \sqrt{73}}{4}$

D. $\frac{7 \pm \sqrt{73}}{4}$

14. Which values of x are in the solution set of the following system of equations?

$$y = 3x - 6$$
$$y = x^2 - x - 6$$

A. $0, -4$
B. $0, 4$
C. $6, -2$
D. $-6, 2$

19. The equation $h(t) = -16t^2\ 864t$ models the path of a rocket shot into the air. After how many seconds does the rocket hit the ground?

A. 27 seconds
B. 54 seconds
C. 108 seconds
D. 120 seconds

25. The graph of $y = (x - 3)^2$ is shifted left 4 units and down 2 units. What is the axis of symmetry of the transformed graph?

A. $x = -2$
B. $x = -1$
C. $x = 1$
D. $x = 7$

27. What is the solution set of the equation $x^2 - 5x = 0$?

A. $\{0, -5\}$
B. $\{0, 5\}$
C. $\{0\}$
D. $\{5\}$

22. For what values of x is the function $f(x) = x^2 - 4x - 5$ increasing?

A. $-1 < x < 5$
B. $x > 2$
C. $x < -1$ or $x > 5$
D. $x < 2$

32. Expressed in factored form, the binomial $4a^2 - 9b^2$ is equivalent to

A. $(2a - 3b)(2a - 3b)$
B. $(2a\ 3b)(2a - 3b)$
C. $(4a - 3b)(a\ 3b)$
D. $(2a - 9b)(2a\ b)$