1. A school athletic director asked each athletic team member to name his or her favorite professional sports team. The results are below:

- Columbus Crew: 3
- Detroit Shock: 4
- Florida Marlins: 20
- Florida Panthers: 8
- Jacksonville Jaguars: 26
- Miami Dolphins: 22
- Miami Heat: 15
- New York Buzz: 5
- Orlando Magic: 18
- Pensacola Power: 7
- Tampa Bay Buccaneers: 17
- Tampa Bay Lightning: 12
- Tampa Bay Rays: 28
- Other: 6

Test-Taking Strategy
Use Intelligent Guessing

What's the probability of drawing 1 hyena out of a bag with 2 hyenas and 3 mice?
Ⓐ −10%   Ⓑ 40%   Ⓒ 60%   Ⓓ 500%

40% < 60%
I'm hoping 40%

"You know it can't be -10% or 500%. So, you can **intelligently guess** between 40% and 60%."

One athletic team member is picked at random. What is the likelihood that this team member's favorite professional sports team is *not* located in Florida?

A. certain

B. likely, but not certain

C. unlikely, but not impossible

D. impossible

2. Trapezoid *KLMN* is graphed in the coordinate plane shown.

Rotate trapezoid *KLMN* 90° clockwise about the origin. What are the coordinates of point *M′*, the image of point *M* after the rotation?

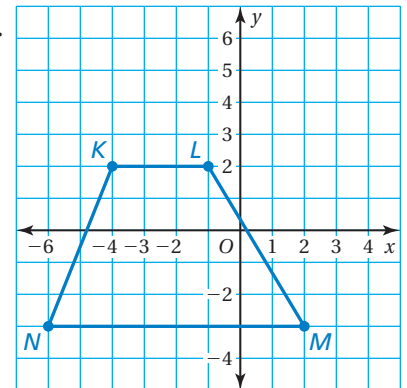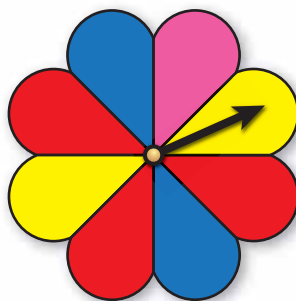**F.** $(-3, -2)$

G. $(-2, -3)$

H. $(-2, 3)$

I. $(3, 2)$

3. Each student in your class voted for his or her favorite day of the week. Their votes are shown below:

- Sunday: 6
- Saturday: 10
- Friday: 8
- Other day: 6

A student from your class is picked at random. What is the probability that this student's favorite day of the week is Sunday?

4. A formula for converting a temperature in degrees Celsius C to a temperature in degrees Fahrenheit F is shown below.

$$F = \frac{9}{5}C + 32$$

When the temperature in degrees Celsius is $-9°$, what is the temperature, to the nearest degree, in degrees Fahrenheit?

A. $-27°$ **C.** $16°$

B. $-16°$ **D.** $27°$

5. A nutritionist calculated the calories in a meal that came from three sources, as shown below.

- Calories from carbohydrates: 240
- Calories from fat: 180
- Calories from protein: 180

The nutritionist wants to make a circle graph to display this data. What should be the angle measure for the section labeled "carbohydrates"?

F. $120°$ **H.** $180°$

G. $144°$ **I.** $240°$

6. A right circular cone has a diameter of 10 centimeters and a slant height of 13 centimeters. Stan was computing its surface area in the box below.

$$\pi r^2 + \pi r \ell = 3.14 \cdot 5^2 + 3.14 \cdot 5 \cdot 13$$
$$= 15.7^2 + 15.7 \cdot 13$$
$$= 246.49 + 204.1$$
$$= 450.59 \ cm^2$$

What should Stan do to correct the error that he made?

A. Use the formula $\frac{1}{3}\pi r^2 h$.

B. Label the answer with the unit cm^3.

C. Square the 5 before multiplying by 3.14.

D. Distribute the 3.14 to get $3.14 \cdot 5 + 3.14 \cdot 13$.

7. Which expression is *not* equal to the other three?

F. 6   **H.** $|6|$

G. -6 **I.** $|-6|$

8. A spinner is divided into 8 congruent sections, as shown below.

You spin the spinner twice. What is the probability that the arrow will stop in a yellow section both times?

9. For a vacation trip, 4 cousins decided to rent a minivan and share the cost equally. They determined that each cousin would have to pay $300.

The minivan had 2 unused seats, so 2 additional cousins joined them. If the larger group of cousins now share the cost equally, what would each cousin have to pay?

A. $150   **C.** $300

B. $200   **D.** $450

10. A travel store has 16 umbrellas in stock. Ten of the umbrellas are black. What percent of the umbrellas are black?

F. 1.6%   **H.** 58%

G. 10%   **I.** 62.5%

11. A professional golfer hit 1125 tee shots, of which 675 landed in the fairway. A statistic called "driving accuracy" is found by using the formula below.

$$\text{driving accuracy} = \frac{\text{number of fairways hit}}{\text{number of tee shots}}$$

Part A   What was the golfer's driving accuracy, expressed as a percent? Show your work and explain your reasoning.

Part B   Based only on your answer to Part A, how many of the golfer's next 500 tee shots would you expect to land in the fairway? Explain your reasoning.