

Titan Learning Center
Mathematics ACT Prep
Set B-Week 8

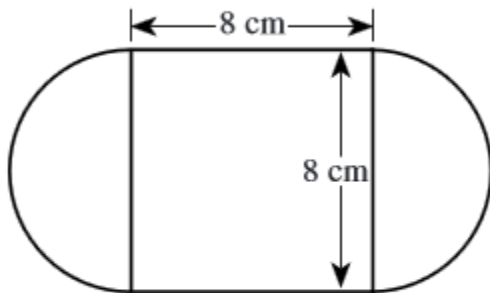
Solve each problem, circling the correct answers. Remember that figures are not necessarily drawn to scale.

1. Jerome, Kevin, and Seth shared a submarine sandwich.

Jerome ate $\frac{1}{2}$ of the sandwich, Kevin ate $\frac{1}{3}$ of the sandwich, and Seth ate the rest. What is the ratio of Jerome's share to Kevin's share to Seth's share?

- A. 2:3:6
- B. 2:6:3
- C. 3:1:2
- D. 3:2:1
- E. 6:3:2

2. The figure below consists of a square and 2 semicircles, with dimensions as shown. What is the outside perimeter, in centimeters, of the figure?



- A. $8 + 8\pi$
 - B. $16 + 8\pi$
 - C. $16 + 16\pi$
 - D. $32 + 8\pi$
 - E. $32 + 16\pi$
3. The graph of $y = -5x^2 + 9$ passes through $(1, 2a)$ in the standard (x, y) coordinate plane. What is the value of a ?
- F. 2
 - G. 4
 - H. 7
 - J. -1
 - K. -8

4. According to the measurements given in the figure below, which of the following expressions gives the distance, in miles, from the boat to the dock?

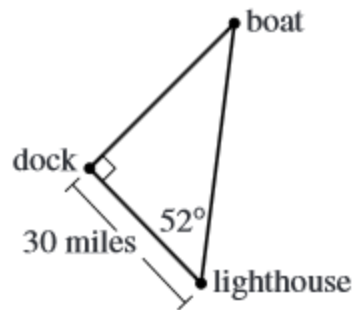
F. $30 \tan 52^\circ$

G. $30 \cos 52^\circ$

H. $30 \sin 52^\circ$

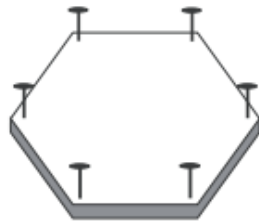
J. $\frac{30}{\cos 52^\circ}$

K. $\frac{30}{\sin 52^\circ}$



5. Minh cuts a board in the shape of a regular hexagon and pounds in a nail at an equal distance from each vertex, as shown in the figure below. How many rubber bands will she need in order to stretch a different rubber band across every possible pair of nails?

- A. 15
 B. 14
 C. 12
 D. 9
 E. 6



TLC Stamp

