

**Titan Learning Center**  
**Mathematics ACT Prep**  
**Set B-Week 3**

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

1. In  $\triangle ABC$ , the sum of the measures of  $\angle A$  and  $\angle B$  is  $47^\circ$ . What is the measure of  $\angle C$  ?

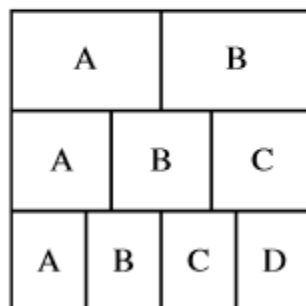
A.  $47^\circ$   
B.  $86^\circ$   
C.  $94^\circ$   
D.  $133^\circ$   
E.  $143^\circ$

2. In the school cafeteria, students choose their lunch from 3 sandwiches, 3 soups, 4 salads, and 2 drinks. How many different lunches are possible for a student who chooses exactly 1 sandwich, 1 soup, 1 salad, and 1 drink?

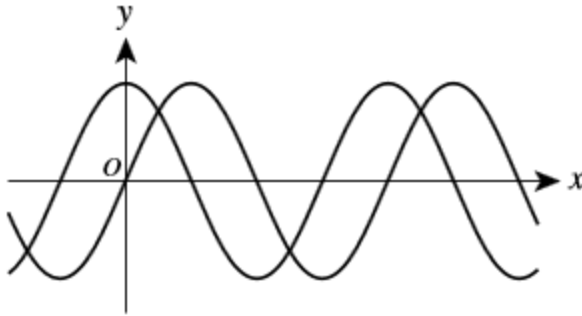
F. 2  
G. 4  
H. 12  
J. 36  
K. 72

3. The square below is divided into 3 rows of equal area. In the top row, the region labeled A has the same area as the region labeled B. In the middle row, the 3 regions have equal areas. In the bottom row, the 4 regions have equal areas. What fraction of the square's area is in a region labeled A ?

F.  $\frac{1}{9}$   
G.  $\frac{3}{9}$   
H.  $\frac{6}{9}$   
J.  $\frac{13}{12}$   
K.  $\frac{13}{36}$



4. The functions  $y = \sin x$  and  $y = \sin(x + a) + b$ , for constants  $a$  and  $b$ , are graphed in the standard  $(x,y)$  coordinate plane below. The functions have the same maximum value. One of the following statements about the values of  $a$  and  $b$  is true. Which statement is it?



- A.  $a < 0$  and  $b = 0$   
B.  $a < 0$  and  $b > 0$   
C.  $a = 0$  and  $b > 0$   
D.  $a > 0$  and  $b < 0$   
E.  $a > 0$  and  $b > 0$
5. For 2 consecutive integers, the result of adding the smaller integer and triple the larger integer is 79. What are the 2 integers?
- A. 18, 19  
B. 19, 20  
C. 20, 21  
D. 26, 27  
E. 39, 40

TLC Stamp

