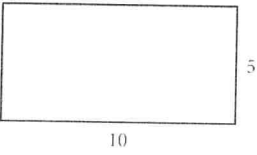


1

3



What is the perimeter of the rectangle shown?

A) 15  
B) 25  
C) 30  
D) 50

2

5

The width of a rectangular dance floor is  $w$  feet. The length of the floor is 6 feet longer than its width. Which of the following expresses the perimeter, in feet, of the dance floor in terms of  $w$ ?

A)  $2w + 6$   
B)  $4w + 12$   
C)  $w^2 + 6$   
D)  $w^2 + 6w$

3

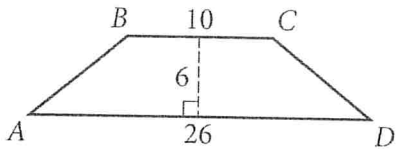
14

A shipping service restricts the dimensions of the boxes it will ship for a certain type of service. The restriction states that for boxes shaped like rectangular prisms, the sum of the perimeter of the base of the box and the height of the box cannot exceed 130 inches. The perimeter of the base is determined using the width and length of the box. If a box has a height of 60 inches and its length is 2.5 times the width, which inequality shows the allowable width  $x$ , in inches, of the box?

A)  $0 < x \leq 10$       C)  $0 < x \leq 17\frac{1}{2}$   
B)  $0 < x \leq 11\frac{2}{3}$       D)  $0 < x \leq 20$

4

17



In the figure shown,  $\overline{BC}$  is parallel to  $\overline{AD}$  and  $AB = CD$ . What is the perimeter of quadrilateral  $ABCD$ ?

5

20

A square is inscribed in a circle with radius  $6\sqrt{2}$  inches. What is the perimeter of the square in inches?

6

21

A landscaper is designing a rectangular fountain with a 4-foot-wide path around it. The equation  $A = 4p + 64$  will relate the area  $A$ , in square feet, of the path to the perimeter  $p$ , in feet, of the fountain. In the design, how many feet will the perimeter of the fountain increase for each additional square foot of the path's area?

A)  $\frac{1}{64}$       C) 4  
B)  $\frac{1}{4}$       D) 64

PERIMETER

7

23

In the figure above,  $\triangle ACD$  is a right triangle and  $\overline{BE}$  is parallel to  $\overline{CD}$ . What is the perimeter of  $\triangle ACD$  to the nearest tenth of a unit?

A) 29.7  
 B) 36.0  
 C) 41.5  
 D) 50.9

8

25

Janice puts a fence around her rectangular garden. The garden has a length that is 9 feet less than 3 times its width. What is the perimeter of Janice's fence if the area of her garden is 5,670 square feet?

A) 342 feet  
 B) 318 feet  
 C) 300 feet  
 D) 270 feet

9

25

In the figure shown, point  $O$  is the center of the circle. One vertex of the square lies on the circle, and the opposite vertex is point  $O$ . If the area of the shaded region is  $36\pi - 18$ , what is the perimeter of the square?

A) 24  
 B) 72  
 C)  $12\sqrt{2}$   
 D)  $36\sqrt{2}$

10

26

The surface area of a cube is  $6\left(\frac{a}{4}\right)^2$ , where  $a$  is a positive constant. Which of the following gives the perimeter of one face of the cube?

A)  $\frac{a}{4}$                       C)  $4a$   
 B)  $a$                               D)  $6a$

11

37

What is the perimeter of an equilateral triangle with a height of  $5\sqrt{3}$  ?

Handwritten calculations for question 11:

<u>1 C</u>	<u>7 C</u>
<u>2 B</u>	<u>8 A</u>
<u>3 A</u>	<u>9 C</u>
<u>4 56</u>	<u>10 B</u>
<u>5 48</u>	<u>11 30</u>
<u>6 B</u>	