

Name:

Date:

1

A box in the shape of a cube has a volume of 64 cubic inches. What is the length of a side of the box?

- (1)  $21.\bar{3}$  in                      (3) 8 in  
(2) 16 in                          (4) 4 in

2

A farmer has a rectangular field that measures 100 feet by 150 feet. He plans to increase the area of the field by 20%. He will do this by increasing the length and width by the same amount,  $x$ . Which equation represents the area of the new field?

- (1)  $(100 + 2x)(150 + x) = 18,000$   
(2)  $2(100 + x) + 2(150 + x) = 15,000$   
(3)  $(100 + x)(150 + x) = 18,000$   
(4)  $(100 + x)(150 + x) = 15,000$

3

A wheel has a radius of 5 feet. What is the minimum number of *complete* revolutions that the wheel must make to roll at least 1,000 feet?

4

Kathy and Tami are at point A on a circular track that has a radius of 150 feet, as shown in the accompanying diagram. They run counterclockwise along the track from A to S, a distance of 247 feet. Find, to the *nearest degree*, the measure of minor arc AS.

