

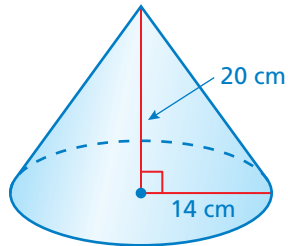
# 7 Standardized Test Practice

1. What is the value of the expression below

when  $h = \frac{1}{2}$  and  $k = -\frac{1}{6}$ ?

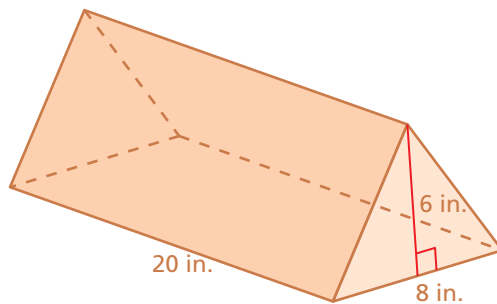
$$h \div 3 + 3 \div k$$

- A.  $-17\frac{5}{6}$                       C. 1  
 B.  $-\frac{1}{3}$                          D.  $17\frac{5}{6}$
2. A right circular cone and its dimensions are shown below.



What is the volume of the right circular cone? (Use  $\frac{22}{7}$  for  $\pi$ .)

- F.  $1,026\frac{2}{3} \text{ cm}^3$                       H.  $4,106\frac{2}{3} \text{ cm}^3$   
 G.  $3,080 \text{ cm}^3$                          I.  $12,320 \text{ cm}^3$
3. A right triangular prism and its dimensions are shown below.



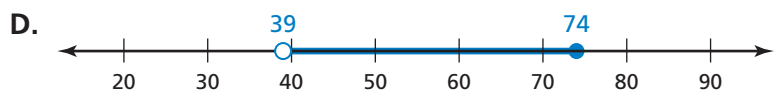
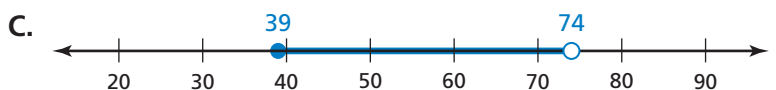
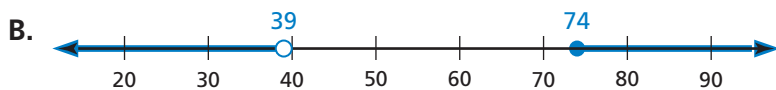
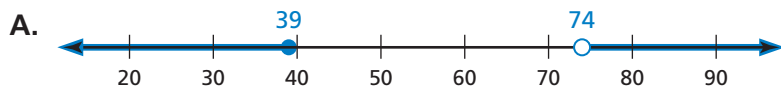
What is the volume of the right triangular prism?

**Test-Taking Strategy**  
**After Answering Easy Questions, Relax**

How much catnip fits in a cylinder whose radius is 1 inch and height is 2 inches?  
 (A)  $2\pi \text{ in.}^3$  (B)  $4\pi \text{ in.}^3$  (C)  $8\pi \text{ in.}^3$  (D)  $2 \text{ in.}^3$

**“After answering the easy questions, relax and try the harder ones. For this,  $\pi r^2 h = 2\pi$ . So, it’s A.”**

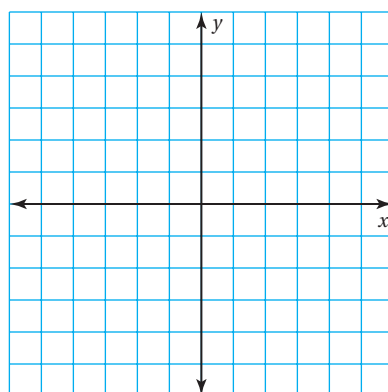
4. A tropical storm has maximum sustained surface winds of at least 39 miles per hour but less than 74 miles per hour. Which graph correctly represents the possible wind speeds of a tropical storm?



5. Use the coordinate plane to answer the question below.

Which point does *not* lie on the same line as the other three?

- F.  $(-5, 3)$                       H.  $(-1, -1)$   
 G.  $(-3, 2)$                       I.  $(1, -4)$



6. Olga was solving an equation in the box shown.

What should Olga do to correct the error that she made?

- A. Multiply both sides by  $-\frac{5}{2}$  instead of  $-\frac{2}{5}$ .  
 B. Multiply both sides by  $\frac{2}{5}$  instead of  $-\frac{2}{5}$ .  
 C. Distribute  $-\frac{2}{5}$  to get  $-4x - 6$ .  
 D. Add 15 to  $-30$ .

$$-\frac{2}{5}(10x - 15) = -30$$

$$10x - 15 = -30\left(-\frac{2}{5}\right)$$

$$10x - 15 = 12$$

$$10x - 15 + 15 = 12 + 15$$

$$10x = 27$$

$$\frac{10x}{10} = \frac{27}{10}$$

$$x = \frac{27}{10}$$

7. It has been raining at a rate of 0.08 inch per hour. At this rate, how much rain will fall in  $2\frac{1}{2}$  hours?

F. 0.032 in.

H. 0.3125 in.

G. 0.2 in.

I. 0.33 in.

8. A right circular cylinder has a volume of 1296 cubic inches. If the radius of the cylinder is divided by 12, what would be the volume, in cubic inches, of the smaller cylinder?



9. If 9 friends share equally a large box of baseball cards, each friend gets 240 cards. If 6 friends share equally the same box of cards, how many cards does each friend get?

A. 80

C. 360

B. 160

D. 400

10. All students in a class were surveyed to find out their preferences for writing instruments. The survey found that 12 students prefer to write with a pencil and 20 students prefer to write with a pen. What percent of students in the class prefer to write with a pencil?

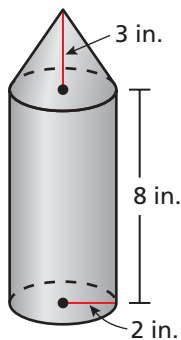
F. 12%

H. 60%

G. 37.5%

I. 62.5%

11. The figure below is a diagram for making a tin lantern.



The figure consists of a right circular cylinder without its top base and a right circular cone without its base. What is the volume, in cubic inches, of the entire lantern? Show your work and explain your reasoning. (Use 3.14 for  $\pi$ .)