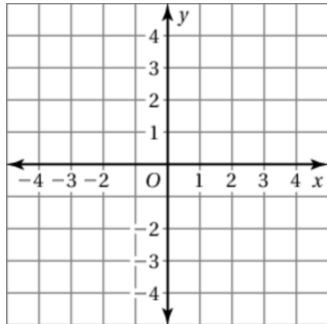


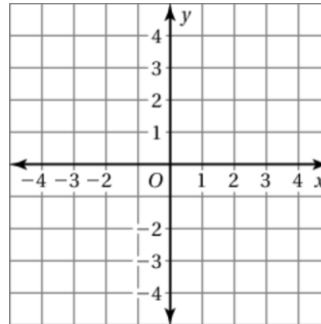
**Test  
2****End-of-Course Test Review Chapter 6-10**

Find the slope and the  $y$ -intercept of the graph of the linear equation.  
Then sketch its graph.

13.  $y = 1.5x + 1$

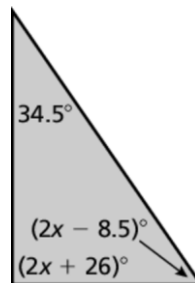


14.  $3x + 5y = 1$



Write an equation of the line in slope-intercept form.

16. the line passing through  $(0, 2)$  and  $(1, -1)$

18. Find the value of  $x$ .

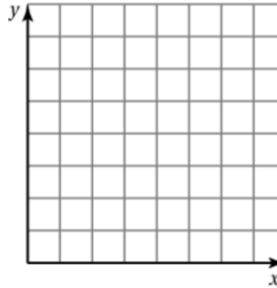
23. Draw a mapping diagram of the set of ordered pairs.

$(0, 1), (2, 5), (4, 1), (3, 2)$

24. The table shows the cost  $y$  (in dollars) of  $x$  peaches.

|                                |   |   |   |    |
|--------------------------------|---|---|---|----|
| <b>Peaches, <math>x</math></b> | 0 | 4 | 8 | 12 |
| <b>Cost, <math>y</math></b>    | 0 | 3 | 6 | 9  |

- a. Graph the data.
- b. Write a linear function that relates  $y$  to  $x$ .
- c. What is the cost of six peaches?



Does the equation or table represent a *linear* or *nonlinear* function?

25.  $\frac{2}{3}x - \frac{1}{2}y = 4$

26. 

|                       |     |     |     |     |
|-----------------------|-----|-----|-----|-----|
| <b><math>x</math></b> | 1.5 | 3.5 | 5.5 | 7.5 |
| <b><math>y</math></b> | 1   | 2   | 4   | 8   |

Evaluate the expression.

27.  $-\sqrt{225} + 4.8$

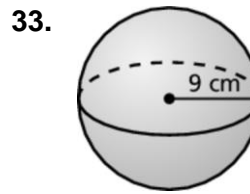
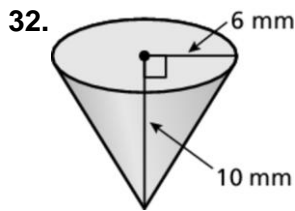
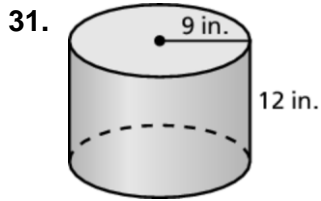
28.  $3\sqrt[3]{-343} + 8$

29. A ladder is placed against the side of a house. The top of the ladder is 24 feet above the ground. The base of the ladder is 7 feet away from the house. Find the length of the ladder.

30. Between which two integers is  $-\sqrt{42}$ ? Explain.

**Test  
2**
**End-of-Course Test (continued)**

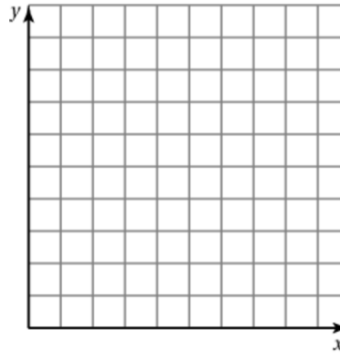
Find the volume of the solid. Round your answer to the nearest tenth.



34. The table shows the number of years of college education and hourly earnings (in dollars) for several people.

|  |   |   |    |    |    |
|--|---|---|----|----|----|
| <b>Number of Years, <math>x</math></b> | 0 | 1 | 3  | 5  | 6  |
| <b>Hourly Earnings, <math>y</math></b> | 6 | 9 | 15 | 26 | 31 |

- Make a scatter plot of the data.
- Draw a line of fit.
- Write an equation for the line of fit.
- Predict the hourly earnings for a person with four years of college education.



Choose an appropriate data display for the situation. Explain your reasoning.

- the percent of students who chose red, green, blue, yellow, or another color as their favorite color
- the average cost of a movie ticket over the last twenty years

Evaluate.

37.  $(-3^3)^{-1}$

38.  $12^{27} \cdot 12^{-29}$

39.  $\frac{(-6)^7}{(-6)^5}$

Multiply. Write your answer in scientific notation.

40.  $(4.0 \times 10^{-1}) \times (2.5 \times 10^{-4})$

41.  $(6.0 \times 10^{-5}) \times (1.5 \times 10^{-13})$