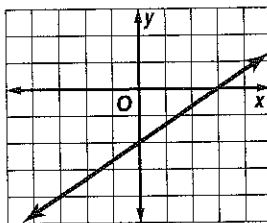


# 4 Chapter 4 Test, Form 2C

SCORE \_\_\_\_\_

Assessment

- Write a linear equation in slope-intercept form to model the situation: A telephone company charges \$28.75 per month plus \$0.10 a minute for long-distance calls.
- Write an equation in standard form of the line that passes through  $(7, -3)$  and has a  $y$ -intercept of 2.
- Write the slope-intercept form of an equation for the line graphed at the right.

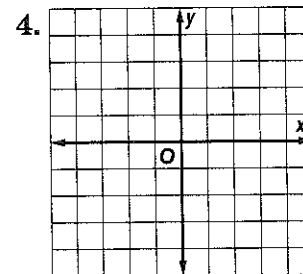


1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

- Graph the line with a  $y$ -intercept of 3 and slope  $-\frac{3}{4}$ .
- Write an equation in slope-intercept form for the line that passes through  $(-1, -2)$  and  $(3, 4)$ .
- Write an equation in standard form for the line that has an undefined slope and passes through  $(-6, 4)$ .
- Write an equation in point-slope form for the line that has slope  $\frac{1}{3}$  and passes through  $(-2, 8)$ .
- Write the standard form of the equation  $y + 4 = -\frac{12}{7}(x - 1)$ .
- Write the slope-intercept form of the equation  $y - 2 = 3(x - 4)$ .
- Write the slope-intercept form of the equation of the line parallel to the graph of  $2x + y = 5$  that passes through  $(0, 1)$ .
- Write the slope-intercept form of the equation of the line perpendicular to the graph of  $y = -\frac{3}{2}x - 7$  that passes through  $(3, -2)$ .
- A scatter plot of data showing the percentage of total Internet users who visited an online store on a given day in December includes the points  $(2007, 2.0)$  and  $(2005, 4.5)$ . Write the slope-intercept form of an equation for the line of fit.



4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

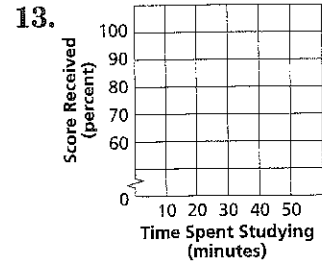
11. \_\_\_\_\_

12. \_\_\_\_\_

# 4 Chapter 4 Test, Form 2C (continued)

For Questions 13–15, use the data in the table.

Time Spent Studying (min)	10	20	30	40	50
Score Received (percent)	53	67	78	87	95



13. Make a scatter plot relating time spent studying to the score received.

14. Write the slope-intercept form of the equation for a line of fit for the data. Use your equation to predict a student's score if the student spent 35 minutes studying.

14. \_\_\_\_\_

15. Is it reasonable to use the equation to estimate the score received for any length of time spent studying?

For Questions 16 and 17, use the data in the table showing the number of congressional seats apportioned to California each decade.

Decade	1940s	1950s	1970s	1990s	2000s
Seats	23	30	43	52	53

Source: Office of the Clerk, U.S. House of Representatives

15. \_\_\_\_\_

16. \_\_\_\_\_

16. Find an equation for the median-fit line.

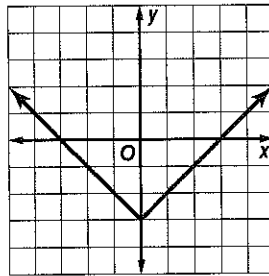
17. Predict the number of seats apportioned to California in the 1930s.

17. \_\_\_\_\_

18. Graph  $f(x) = \lfloor x - 1 \rfloor$ .

18.

19. Determine the domain and range for the graph shown.



19. \_\_\_\_\_

20. Graph  $g(x) = \begin{cases} x + 2 & \text{if } x > 1 \\ 2x - 1 & \text{if } x \leq 1 \end{cases}$

20.

**Bonus** In a certain lake, a 1-year-old bluegill fish is 3 inches long, while a 4-year-old bluegill fish is 6.6 inches long. Assuming the growth rate can be approximated by a linear equation, write an equation in slope-intercept form for the length  $\ell$  of a bluegill fish in inches after  $t$  years. Then use the equation to determine the age of a 9-inch bluegill.

B: \_\_\_\_\_