READY TO GO ON?

CHAPTER 5

SECTION 5B

Quiz for Lessons 5-6 Through 5-9

5-6 Slope-Intercept Form

Graph each line given the slope and *y*-intercept.

1. slope $= \frac{1}{4}$; *y*-intercept $= 2$

2. slope $= -3$; *y*-intercept $= 5$

3. slope $= -1$; *y*-intercept $= -6$

Write each equation in slope-intercept form, and then graph.

4. $2x + y = 5$

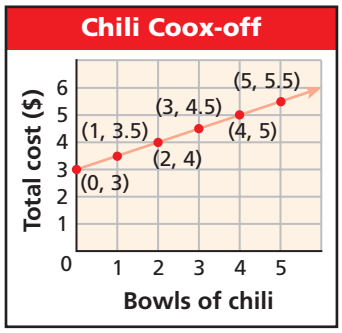
5. $2x - 6y = 6$

6. $3x + y = 3x - 4$

7. **Entertainment** At a chili cook-off, people pay a \$3.00 entrance fee and \$0.50 for each bowl of chili they taste. The graph shows the total cost per person as a function of the number of bowls of chili tasted.

a. Write a rule that gives the total cost per person as a function of the number of bowls of chili tasted.

b. Identify the slope and *y*-intercept and describe their meanings in this situation.



5-7 Point-Slope Form

Graph the line with the given slope that contains the given point.

8. slope $= -3$; $(0, 3)$

9. slope $= -\frac{2}{3}$; $(-3, 5)$

10. slope $= 2$; $(-3, -1)$

Write an equation in slope-intercept form for the line through the two points.

11. $(3, 1)$ and $(4, 3)$

12. $(-1, -1)$ and $(1, 7)$

13. $(1, -4)$ and $(-2, 5)$

5-8 Slopes of Parallel and Perpendicular Lines

Identify which lines are parallel.

14. $y = -2x$; $y = 2x + 1$; $y = 2x$; $y = 2(x + 5)$

15. $-3y = x$; $y = -\frac{1}{3}x + 1$; $y = -3x$; $y + 2 = x + 4$

Identify which lines are perpendicular.

16. $y = -4x - 1$; $y = \frac{1}{4}x$; $y = 4x - 6$; $x = -4$

17. $y = -\frac{3}{4}x$; $y = \frac{3}{4}x - 3$; $y = \frac{4}{3}x$; $y = 4$; $x = 3$

18. Write an equation in slope-intercept form for the line that passes through $(5, 2)$ and is parallel to the line described by $3x - 5y = 15$.

19. Write an equation in slope-intercept form for the line that passes through $(3, 5)$ and is perpendicular to the line described by $y = -\frac{3}{2}x - 2$.

5-9 Transforming Linear Functions

Graph $f(x)$ and $g(x)$. Then describe the transformation(s) from the graph of $f(x)$ to the graph of $g(x)$.

20. $f(x) = 5x$, $g(x) = -5x$

21. $f(x) = \frac{1}{2}x - 1$, $g(x) = \frac{1}{2}x + 4$

22. An attorney charges an initial fee of \$250 and then \$150 per hour. The total bill after x hours is $f(x) = 150x + 250$. How will the graph of this function change if the initial fee is reduced to \$200? if the hourly rate is increased to \$175?