

# 5.4–5.6 Quiz



Evaluate the function when  $x = -4, 0,$  and  $2$ . (Section 5.4)

1.  $f(x) = x - 2$                       2.  $g(x) = 7x + 3$                       3.  $h(x) = -\frac{1}{4}x + 5$

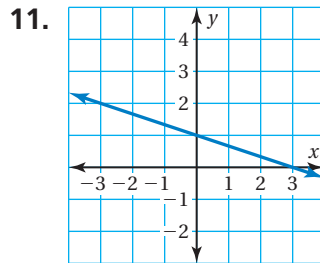
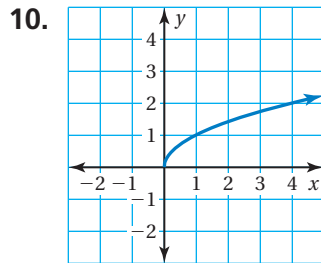
Graph the function. Compare the graph to the graph of  $f(x) = 4x$ . (Section 5.4)

4.  $g(x) = 4x + 1$                       5.  $h(x) = 4x - 2$                       6.  $n(x) = 4x - 6$

Graph the function. Compare the graph to the graph of  $y = |x|$ . Describe the domain and range. (Section 5.4)

7.  $y = |x| + 2$                       8.  $y = |x - 6|$                       9.  $y = 2|x|$

Does the table or graph represent a *linear* or *nonlinear* function? Explain. (Section 5.5)



12. 

x	y
0	3
3	0
6	3
9	6

Write an equation for the  $n$ th term of the arithmetic sequence. Then find  $a_{15}$ . (Section 5.6)

13. 5, 6, 7, 8, ...                      14. -3, -2, -1, 0, ...  
 15. 4, 8, 12, 16, ...                      16. -1.5, -0.5, 0.5, 1.5, ...

17. **HIGH-SPEED RAIL** A high-speed passenger train travels at 110 miles per hour. The function  $d(x) = 1375 - 110x$  represents the distance (in miles) the train is from its destination after  $x$  hours. How far is the train from its destination after 8 hours? (Section 5.4)

18. **CHICKEN SALAD** The equation  $y = 7.9x$  represents the cost  $y$  (in dollars) of buying  $x$  pounds of chicken salad. Does this equation represent a linear or nonlinear function? Explain. (Section 5.5)

19. **PHONE BILL** The table shows your phone bill for each minute over your plan limit. (Section 5.6)

- a. Write an equation for the  $n$ th term of the arithmetic sequence.  
 b. Your phone bill is \$45.35. How many extra minutes were billed to your account?

Extra Minute	1	2	3
Phone Bill	\$40.40	\$40.85	\$41.30