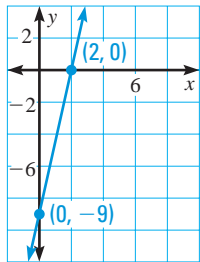


# CHAPTER 4

# Chapter Standardized Test

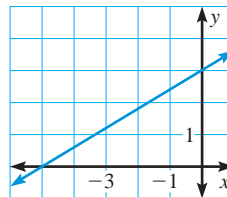
**TEST-TAKING STRATEGY** Read all of the answer choices before deciding which is the correct one.

1. **MULTIPLE CHOICE** What is the equation of the line shown?



- (A)  $9x - 2y = -18$   
 (B)  $-9x - 2y = 18$   
 (C)  $9x + 2y = 18$   
 (D)  $9x + 2y = -18$   
 (E)  $-9x + 2y = -18$
2. **MULTIPLE CHOICE** What is the y-intercept of the line  $-4x - \frac{1}{2}y = 10$ ?  
 (A)  $-20$  (B)  $-4$   
 (C)  $-\frac{5}{2}$  (D)  $5$   
 (E)  $20$
3. **MULTIPLE CHOICE** Write the equation  $3x - 4y = 20$  in slope-intercept form.  
 (A)  $y = -\frac{3}{4}x - 5$   
 (B)  $y = -\frac{3}{4}x + 5$   
 (C)  $y = \frac{3}{4}x - 5$   
 (D)  $y = \frac{3}{4}x + 5$   
 (E)  $y = 20 - 3x$
4. **MULTIPLE CHOICE** Find the slope of the line passing through the points  $(1, 2)$  and  $(2, 1)$ .  
 (A)  $1$  (B)  $3$   
 (C)  $2$  (D)  $-1$   
 (E)  $-2$

5. **MULTIPLE CHOICE** What is the slope of the line shown?



- (A)  $-5$  (B)  $-\frac{3}{5}$   
 (C)  $\frac{3}{5}$  (D)  $\frac{5}{3}$   
 (E)  $3$
6. **MULTIPLE CHOICE** What is the slope of the graph of the equation  $5x - y = -2$ ?  
 (A)  $-5$  (B)  $5$   
 (C)  $1$  (D)  $-2$   
 (E)  $2$
7. **MULTIPLE CHOICE** Which point does *not* lie on the graph of  $x = -12$ ?  
 (A)  $(-12, 0)$   
 (B)  $(-12, -12)$   
 (C)  $(-12, 1)$   
 (D)  $(-1, -12)$   
 (E)  $(-12, 12)$
8. **MULTIPLE CHOICE** What is the x-intercept of  $-13x - y = -65$ ?  
 (A)  $-65$  (B)  $-5$   
 (C)  $0$  (D)  $5$   
 (E)  $65$
9. **MULTIPLE CHOICE** Find the value of  $f(x) = -x^2 - 6x - 7$  when  $x = -2$ .  
 (A)  $-23$  (B)  $-15$   
 (C)  $1$  (D)  $7$   
 (E)  $9$

**QUANTITATIVE COMPARISON** In Exercises 10–12, choose the statement below that is true about the given numbers.

- (A) The number in column A is greater.
- (B) The number in column B is greater.
- (C) The two numbers are equal.
- (D) The relationship cannot be determined from the given information.

	Column A	Column B
10.	The slope of the line through $(4, -3)$ and $(-12, -3)$	0
11.	The slope of the line through $(4.5, 6)$ and $(-7, 4)$	The slope of the line through $(-6, 4.5)$ and $(4, -7)$
12.	The slope of the line through $(3.5, y)$ and $(6.8, 4)$	The slope of the line through $(3.5, q)$ and $(6.8, 4)$

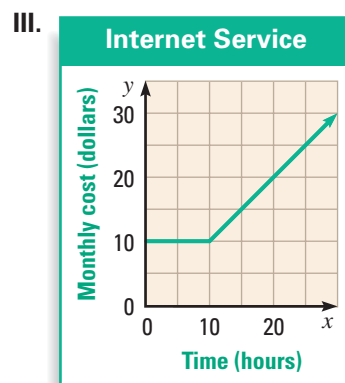
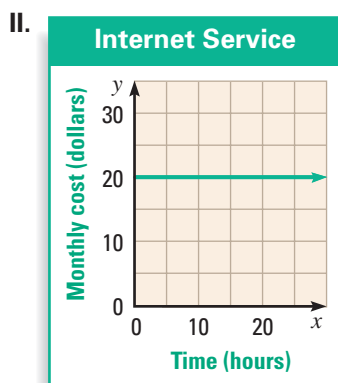
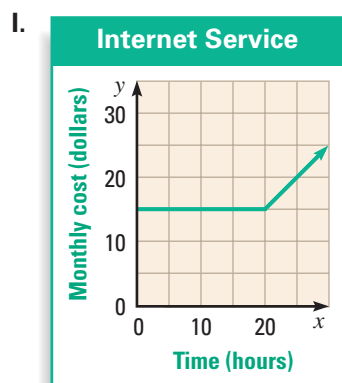
13. **MULTI-STEP PROBLEM** An Internet provider offers three different levels of monthly service.

**Standard:** \$10 for the first 10 hours and \$1 for each additional hour.

**Upgrade:** \$15 for the first 20 hours and \$1 for each additional hour.

**Unlimited:** \$20 per month with no hourly charge.

- a. Tell whether each graph represents Standard, Upgrade, or Unlimited service. Explain your reasoning.



- b. Write an equation for the total cost  $T$  per month for Upgrade service as a function of the number of additional hours used  $b$ .
- c. If you use the Internet 13 hours per month, which service will cost the least? Explain.
- d. If you use the Internet 24 hours per month, which service will cost the least? Explain.
- e. The equation  $C = 10 + a$  gives the total cost  $C$  per month for Standard service as a function of the number of additional hours used  $a$ . Explain how this model is different from the one you labeled Standard in part (a).