

Practice C

For use with pages 3-10

Identify the property shown.

10. $a + (b + c) = a + (c + b)$

COMMUNATIVE PROPERTY

12. $a + (b + 3) = (a + b) + 3$

ASSOCIATIVE PROPERTY

14. $x + (-x) = 0$

INVERSE PROPERTY (ADD)

11. $1(a + b) = a + b$

IDENTITY PROPERTY (MULT)

13. $b(c + a) = b \cdot c + b \cdot a$

DISTRIBUTIVE PROPERTY

15. $a \cdot b + 0 = a \cdot b$

IDENTITY PROPERTY (ADDITION)

16. $z \cdot \frac{1}{z} = 1$

INVERSE PROPERTY (MULT)

Practice C

For use with pages 11-17

Write the expression using exponents.

4. $(-3x)(-3x)(-3x) + (x \cdot x)$

$(-3x)^3 + x^2$

5. -6 to the 8th power

$(-6)^8$

3. $-3 \cdot 3 \cdot 3 \cdot 3$

$\frac{-3(3)^3}{-3 \cdot 3^3} = \boxed{-3^4}$

Evaluate the expression.

7. $(4 + 3)(-1 + 5)^2$

$7(4)^2 = 7(16) =$

$\boxed{112}$

8. $(-8 + 6) \div (3 - 1)^2$

$\frac{-2}{(2)^2} = \frac{-2}{4}$

$\boxed{-\frac{1}{2}}$

10. $((3 - 1) \cdot 2 + (-3))^5$

$(2 \cdot 2 + -3)^5$

$(1)^5$

$\boxed{1}$

11. $-2^5 + (3 - 5)^5$

$-32 + (-2)^5 =$

$-32 - 32 =$

$\boxed{-64}$

Evaluate the expression for the given values of x and y.

14. $\frac{5(x - y)}{2xy + 1}$ when $x = -2$ and $y = -5$

$\frac{5(-2 - 5)}{2(-2)(-5) + 1} = \frac{5(-7)}{21} = \frac{-35}{21} = \frac{-5}{3}$

16. $\frac{(x + y)^2 - 3}{x + y}$ when $x = \frac{1}{2}$ and $y = -\frac{3}{2}$

$\frac{(\frac{1}{2} - \frac{3}{2})^2 - 3}{\frac{1}{2} - \frac{3}{2}} = \frac{(-1)^2 - 3}{-1} = \frac{-2}{-1} = \boxed{2}$

Simplify the expression.

18. $6(x^2 - x) - 3(2x - x^2)$

$6x^2 - 6x - 6x + 3x^2 =$

$\boxed{9x^2 - 12x}$

19. $4(x + y) - 3x + y$

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

$\boxed{x + 5y}$

21. $x^3 + 2(x^2 - 1) + x^2(x + 1)$

$x^3 + 2x^2 - 2 + x^3 + x^2 =$

$\boxed{2x^3 + 3x^2 - 2}$

20. $4(x - y) + 3(y - x)$

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

$\boxed{x - y}$

22. $0.5(2x + 8) - 3(2 - 3x)$

$x + 4 - 6 + 9x =$

$\boxed{10x - 2}$

Practice C

For use with pages 19-24

Solve the equation. Check your solution.

$$5. \quad -4(3-x) + 6 = 2(x-3)$$

$$-12 + 4x + 6 = 2x - 6$$

$$4x - 6 = 2x - 6$$

$$2x = 0$$

$$x = 0$$

C: $-12 + 6 = 2(-3)$
 $-6 = -6 \checkmark$

$$6. \quad 2(x+1) = 4 - 3(2x+1)$$

$$2x+2 = 4 - 6x - 3$$

$$2x+2 = -6x+1$$

$$8x = -1$$

$$x = -1/8$$

C: $2(7/8) = 4 - 3(3/4)$
 $7/4 = 4 - 9/4$
 $13/4 = 4 - 2 1/4$
 $1 3/4 = 1 3/4 \checkmark$

$$7. \quad 3(1-x) - (3+x) = 8$$

$$3 - 3x - 3 - x = 8$$

$$-4x = 8$$

$$x = -2$$

C: $3(3) - (1) = 8$
 $8 = 8 \checkmark$

$$10. \quad \frac{3}{4}(2x+8) = 5-x$$

$$\frac{3}{2}x + 6 = 5-x$$

$$+2/2x - 6 - 6 + x$$

$$\frac{2}{5} \cdot \frac{5}{2}x = -1 \left(\frac{2}{5}\right)$$

$$x = -2/5$$

C: $\frac{3}{4}(-\frac{4}{5} + 8) = 5 + 2/5$
 $\frac{3}{4}(\frac{36}{5}) = 5.4$
 $\frac{27}{5} = 5.4$
 $5 2/5 = 5.4 \checkmark$

$$11. \quad \frac{1}{5}(\frac{5}{2}x - 10) = 4(x+3)$$

$$\frac{1}{2}x - 2 = 4x + 12$$

$$-2x + 2 = 4x + 12$$

$$-3\frac{1}{2}x = 14$$

$$\left(\frac{-2}{7}\right) \cdot \frac{7}{2}x = 14 \left(\frac{-2}{7}\right)$$

$$x = -4$$

C: $\frac{1}{5}(\frac{5}{2}(-4) - 10) = 4(-4+3)$
 $4(-4+3)$
 $\frac{1}{5}(-20) = -4$
 $-4 = -4 \checkmark$

$$15. \quad 1.5(4x-2) = 2(0.5x-3.5)$$

$$6x - 3 = x - 7$$

$$-x + 3 = -x + 3$$

$$\frac{5x}{5} = \frac{-4}{5}$$

$$x = -4/5$$

$$x = -0.8$$

C: $1.5(-3.2 - 2) = 2(-0.4 - 3.5)$
 $1.5(-5.2) = 2(-3.9)$
 $-7.8 = -7.8 \checkmark$
 $-5.2 \uparrow$
 -2.6

$$18. \quad 6x + 2 - 4x = 3(2x+1) - 2(2x + \frac{1}{2})$$

$$2x+2 = 6x+3 - 4x - 1$$

$$2x+2 = 2x+2 \quad (T)$$

$$x = \text{All Real \#}'s$$

IDENTITY

$$19. \quad -5(2x+3) = 2(4-3x) - 4x$$

$$-10x - 15 = 8 - 6x - 4x$$

$$-10x - 15 = -10x + 8$$

$$+10x \quad +10x$$

$$-15 \neq 8 \quad (F)$$

$$x = \text{No Solution}$$

Practice B

For use with pages 26-32

Simplify:
WRITE IN $Y=MX+B$ FORM

SOLVE FOR Y: LEAVE FRACTIONS IN IMPROPER FORM.

$$1. \begin{array}{r} 3x - 7y = 8 \\ -3x \quad -3x \\ \hline \end{array}$$

$$\begin{array}{r} -7y = -3x + 8 \\ -7 \quad -7 \quad -7 \\ \hline \end{array}$$

$$y = \frac{3}{7}x - \frac{8}{7}$$

$$2. x = 12 - xy$$

$$\begin{array}{r} -xy = x - 12 \\ -x \quad -x \quad -x \\ \hline \end{array}$$

$$y = -1 + \frac{12}{x}$$

$$y = \frac{12}{x} - 1$$

$$8. \begin{array}{r} -3x + 7 = 2y + 3 \\ -3 \quad -3 \\ \hline \end{array}$$

$$\begin{array}{r} 2y = -3x + 4 \\ 2 \quad 2 \quad 2 \\ \hline \end{array}$$

$$y = \frac{-3}{2}x + 2$$

$$9. 8x + 3y = 10$$

$$\begin{array}{r} 3y = -8x + 10 \\ 3 \quad 3 \quad 3 \\ \hline \end{array}$$

$$y = \frac{-8}{3}x + \frac{10}{3}$$

$$10. \begin{array}{r} 2 + xy = 5x \\ -7 \quad -2 \\ \hline \end{array}$$

$$\begin{array}{r} xy = 5x - 2 \\ x \quad x \quad x \\ \hline \end{array}$$

$$y = \frac{-2}{x} + 5$$

Solve the formula for the indicated variable.

13. Height of an Equilateral Triangle

$$\text{Solve for } s: h = \frac{\sqrt{3}}{2}s \Rightarrow$$

$$s = \frac{2h}{\sqrt{3}}$$

← NOT SIMPLIFIED

Remember RATIONALIZE DENOMINATOR

$$s = \frac{2h\sqrt{3}}{3}$$

15. Volume of a Right Circular Cone

$$\text{Solve for } h: V = \frac{\pi r^2 h}{3} \left(\frac{3}{\pi r^2} \right) \rightarrow$$

$$h = \frac{3V}{\pi r^2}$$

17. Area of a Trapezoid

$$\text{Solve for } h: A = \frac{h}{2}(b_1 + b_2) \Rightarrow$$

$$\frac{2A}{b_1 + b_2} = \frac{h(b_1 + b_2)}{(b_1 + b_2)} \rightarrow$$

$$h = \frac{2A}{b_1 + b_2}$$

19. Lateral Surface Area of a Right Circular Cylinder

$$\text{Solve for } r: S = 2\pi rh$$

$$\frac{S}{2\pi h} = \frac{2\pi r h}{2\pi h} \rightarrow$$

$$r = \frac{S}{2\pi h}$$

Practice C

For use with pages 41-47

Solve the inequality. AND GRAPH.

1. $4 - 2x > x + 1$
 $-4 -x -x = 4$
 $-2x > -3$
 $x < 1.5$ (circled)

4. $1 - 2x < -3$ or $3 - x > 5$
 $-2x < -4$ or $-x > 2$
 $x > 2$ or $x < -2$ (circled)

$x > 2$ or $x < -2$
 Graph: $x < 1$ and $x > 2$ on a number line.

6. $4 - 3x < 5(x + 1)$
 $-3x + 4 < 5x + 5$
 $-8x < 1$
 $x > -1/8$ (circled)

9. $-4 < 3(x + 2) - 1 < 2$
 $-3 < 3x + 4 < 3$
 $-6 < 3x < -6$
 $3x/3 < -3/3$
 $x < -1$ (circled)

Decide which inequalities have no solution and which inequalities are true for all real numbers.

17. $3(x + 2) - 4x > x - (2x - 8)$
 $3x + 6 - 4x > x - 2x + 8$
 $-x + 6 > -x + 8$
 $6 > 8$ (F)

$x = \text{NO SOLUTION}$

18. $5(4 - x) \leq -4x + 20 - x$
 $20 - 5x \leq -5x + 20$
 $20 \leq 20$ (T)

$x = \text{ALL REAL NUMBERS}$

Practice C

For use with pages 50-56

Solve the equation.

1. $|6x - 3| = 9$
 $6x - 3 = \pm 9$
 $6x = 3 \pm 9$
 $x = 2, -1$

5. $|2(4 - x)| = 12$
 $8 - 2x = \pm 12$
 $x = \frac{-8 \pm 12}{-2}$
 $x = 10, -2$

$\frac{3}{4} + 2x = +2$
 $2x = 1\frac{1}{4} - 2$
 $x = \frac{5}{4} - 2$
 $x = \frac{5}{8}$ (circled)

$\frac{3}{4} + 2x = -2$
 $2x = -2\frac{3}{4} - \frac{3}{4}$
 $x = \frac{-13}{4} - \frac{1}{2}$
 $x = \frac{-13}{8}$ (circled)

3. $|\frac{3}{4} + 2x| = 2$

Solve the inequality. If there is no solution, write no solution.

13. $|4 - x| > 3$
 $4 - x < -3$ or $4 - x > 3$
 $x < 7$ or $x < 1$
 $x > 7$ or $x < 1$ (circled)

14. $|8x - 12| \leq 4$
 $-4 \leq 8x - 12 \leq 4$
 $8 \leq 8x \leq 16$
 $1 \leq x \leq 2$ (circled)

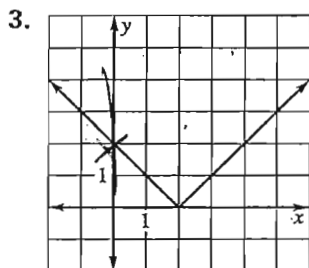
18. $|1 + \frac{3}{4}x| > -1$
 Abs value CAN NOT be negative
 $x = \text{NO SOLUTION}$

19. $|2 - 5x| \leq 0$
 $0 \leq 2 - 5x \leq 0$
 $2/5 \leq x \leq 2/5$
 $x = 2/5$ (circled)

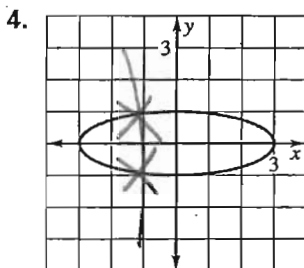
Practice B

For use with pages 67-74

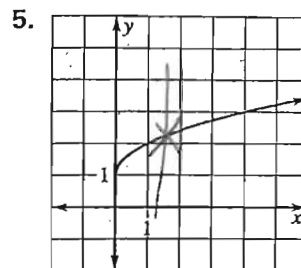
Use the vertical line test to determine whether the relation is a function. **EXPLAIN.**



FUNCTION



NOT FUNCTION BECAUSE FAILS V-LINE TEST (multiple points)



FUNCTION

Practice C

For use with pages 67-74

Tell whether the relation is a function. **EXPLAIN. GIVE THE DOMAIN AND RANGE.**

1. Input Output

3 → -1
2 → -5
5 → 5
4 → 6

NOT FUNCTION

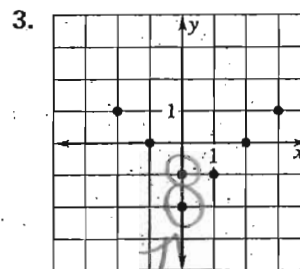
3, -1
3, -5
2, -5
5, 5
4, 6

D: 2, 3, 4, 5
R: -1, -5, 5, 6

2.

x	1	2	4	7	0
y	0	0	0	0	0

FUNCTION
D: 0, 1, 2, 4, 7
R: 0



(-2, 1)
(1, 0)
(0, -1)
(0, -2)
(1, -1)
(2, 0)
(3, 1)

NOT FUNCTION
D: -2, 0, 1, 2, 3
R: -2, -1, 0, 1

Decide whether the function is linear. Then find the indicated value of $f(x)$.

14. $f(x) = 7x + 2$, $f(2)$

$f(2) = 7(2) + 2$

$f(2) = 16$

LINER

15. $f(x) = x^2 + 3x - 1$, $f(-3)$

$f(-3) = 9 - 9 - 1$

$f(-3) = -1$

NOT LINEAR

16. $f(x) = |x| + x$, $f(-5)$

$f(-5) = 5 + -5$

$f(-5) = 0$

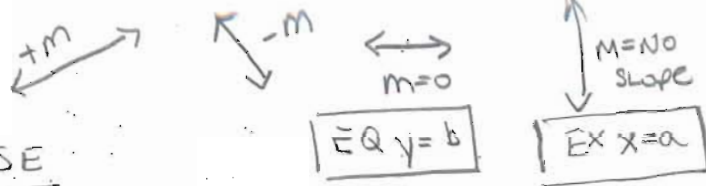
NOT LINEAR

2.2

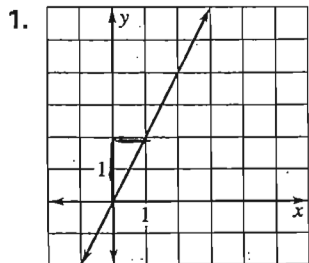
Practice A

For use with pages 75-81

$$m = \frac{\text{RISE}}{\text{RUN}}$$

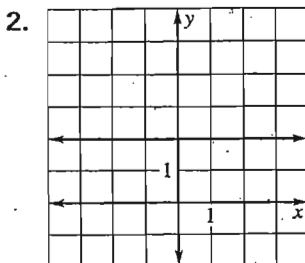


Estimate the slope of the line.



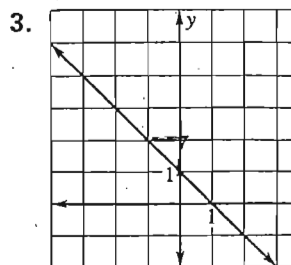
$$m = 2/1$$

$$m = 2$$



$$m = \frac{0}{1}$$

$$m = 0$$



$$m = -1/1$$

$$m = -1$$

2.2

Practice B

For use with pages 75-81

$$m = \frac{\Delta y}{\Delta x}$$

Find the slope of the line passing through the given points.

2. (1, 4), (5, 0) $m = \frac{4-0}{1-5} = \frac{4}{-4} = -1$ $m = -1$

14. (7, 5) and (7, -8) $m = \frac{5+8}{7-7} = \frac{13}{0}$ $m = \text{UNDEFINED}$

5. (0, -8), (-3, -5) $m = \frac{-8+5}{0+3} = \frac{-3}{3} = -1$ $m = -1$

16. (0, 4) and (-3, 4) $m = \frac{4-4}{0+3} = \frac{0}{3} = 0$ $m = 0$

Tell whether the lines are *parallel*, *perpendicular*, or *neither*.

17. Line 1: through (3, 2) and (1, 5)
Line 2: through (-1, 6) and (2, 8)

$$m(L_1) = \frac{2-5}{3-1} = \frac{-3}{2} = -\frac{3}{2}$$

$$m(L_2) = \frac{6-8}{-1-2} = \frac{-2}{-3} = \frac{2}{3}$$

\perp LINES

NEGATIVE RECIPROCAL

$$m_1 \cdot m_2 = -1$$

18. Line 1: through (-3, 5) and (4, -8)
Line 2: through (5, 3) and (4, 2)

$$m(L_1) = \frac{-5+8}{-3+6} = \frac{3}{3} = 1$$

$$m(L_2) = \frac{3-2}{5-4} = \frac{1}{1} = 1$$

// LINES

Same slope

Practice C

For use with pages 82-89

3 FORMS OF LINEAR EQS
 ① SLOPE-INTERCEPT
 $y = mx + b$ $m = \text{slope}$
 $b = \text{y-intercept}$

Find the slope and the y-intercept of the line.

② P/S: $y - y_1 = m(x - x_1)$

③ STANDARD: $Ax + By = C$

4. $y = -3$

$m = 0$
 $B = -3$

7. $7x + 5y - 8 = 0$

$5y = -7x + 8$
 $M = -7/5$ $B = 8/5$

8. $-3x + 2y + 4 = 0$

$2y = 3x - 4$
 $M = 3/2$ $B = -2$

9. $-8x + 3y = 0$

$3y = 8x$
 $y = 8/3 x$
 $M = 8/3$ $B = 0$

Find the intercepts of the line.

13. $3x + 4y - 12 = 0$ $3x + 4y = 12$ $X: 4$ $Y: 3$

17. $4x + y = 3$ $X: 3/4$ $Y: 3$

20. $2x + 3y = 3x - y + 1$
 $-x + 4y = 1$ $X: -1$ $Y: 1/4$

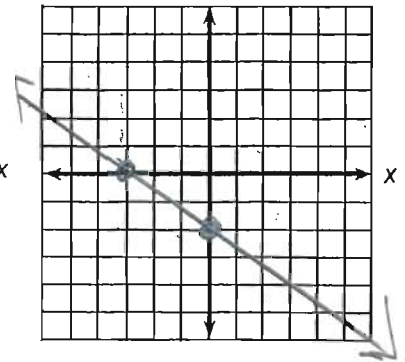
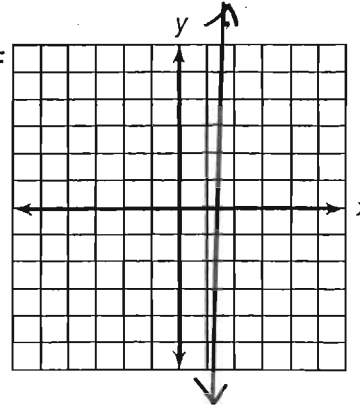
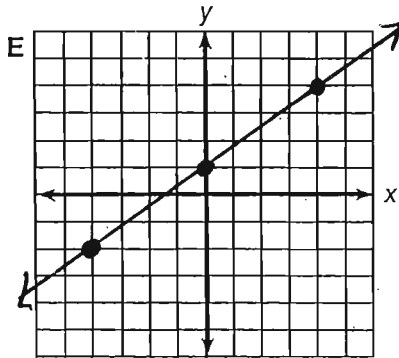
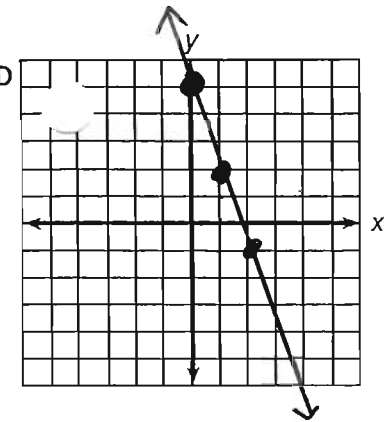
Graph the equation.

22. $y = -3x + 5$

24. $y = 3/4 x + 1$

25. $x = 4/3$

26. $2x + 3y + 6 = 0$
 $2x + 3y = -6$
 $X: -3$ $Y: -2$



Practice A

For use with pages 91-98

Write an equation of the line that has the given slope and y-intercept.

5. $m = 2, b = 0$

$y = 2x$

6. $m = 0, b = 7$

$y = 7$

Write an equation of the line that passes through the given point and has the given slope. IN BOTH POINT-SLOPE AND SLOPE INTERCEPT FORM.

3. $(5, -2), m = -1$

14. $(-3, -7), m = 2$

P/S $y + 2 = -1(x - 5)$
 $y + 2 = -x + 5$
S/I $y = -x + 3$

P/S $y + 7 = 2(x + 3)$
S/I $y = 2x - 1$

Write an equation of the line that passes through the given points. IN SLOPE INTERCEPT

16. (1, 1), (5, 9) $m = \frac{1-9}{1-5} = \frac{-8}{-4}$
 $m = 2$

$y - 1 = 2(x - 1)$
 $y = 2x - 1$

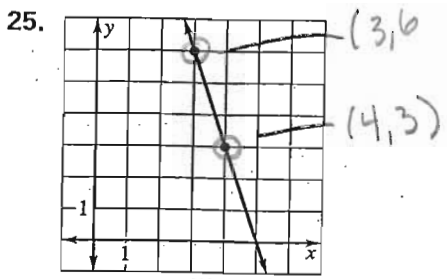
17. (2, 1), (3, -7) $m = \frac{1-7}{2-3}$
 $m = -8$

$y - 1 = -8(x - 2)$
 $y = -8x + 17$

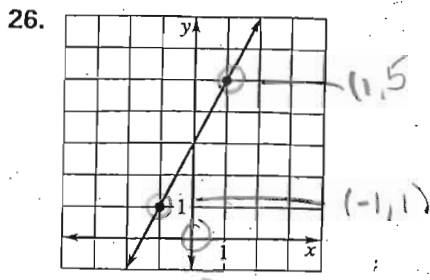
18. (-1, 4), (2, 16) $m = \frac{4-16}{-1-2} = \frac{-12}{-3}$
 $m = 4$

$y - 4 = 4(x + 1)$
 $y = 4x + 8$

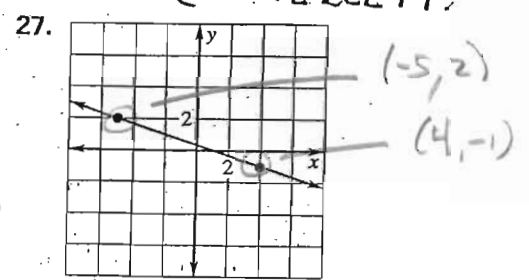
Write an equation of the line. IN BOTH POINT-SLOPE AND SLOPE INTERCEPT.



$m = -3$
 PS $y - 6 = -3(x - 3)$
 $y - 3 = -3(x - 4)$
 SI $y = -3x + 15$



$m = 2$
 PS $y - 1 = 2(x + 1)$
 $y - 5 = 2(x - 1)$
 SI $y - 5 = 2x - 2$
 $y = 2x + 3$



$m = -3/9$ $m = -1/3$
 PS $y - 2 = -1/3(x + 5)$
 $y + 1 = -1/3(x - 4)$
 SI $y + 1 = -1/3x + 4/3$
 $y = -1/3x + 1/3$

LESSON
2.6

Practice

For use with pages 108-113

SOLID LINE \leq, \geq
 DOTTED: $<, >$
 TIP: USE (0,0) FOR YOUR TEST POINT

Match the inequality with its graph.

15. $3x + y > 1$ $y > -3x + 1$ (D)

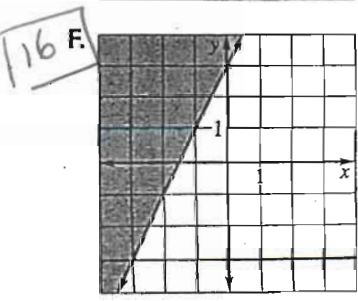
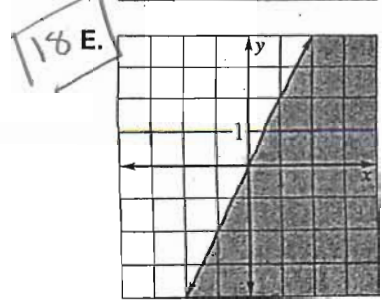
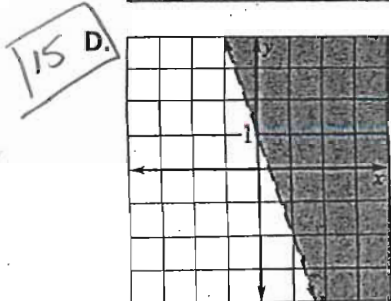
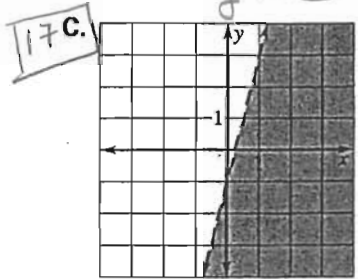
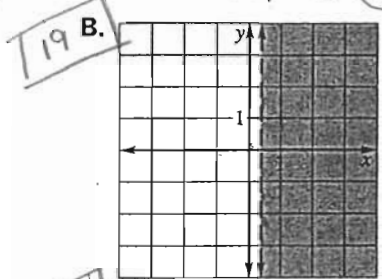
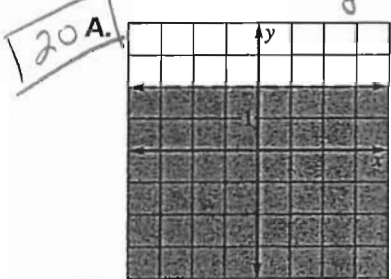
16. $2x - y \leq -3$ $y \geq 2x + 3$ (F)

17. $-4x + y < -1$ $y < 4x - 1$ (C)

18. $-2x + y \leq 0$ $y \leq 2x$ (E)

19. $5x > 2$ $x > 2/5$ (B)

20. $3y < 6$ $y < 2$ (A)



LESSON
2.6

Practice B

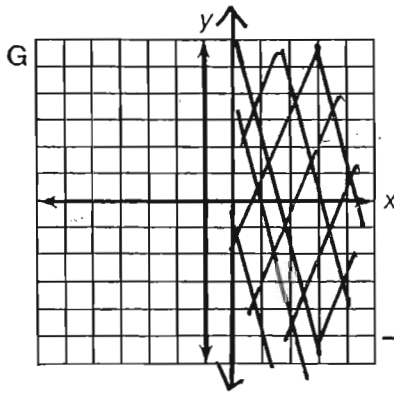
For use with pages 108-113

Check whether the given ordered pairs are solutions of the inequality.

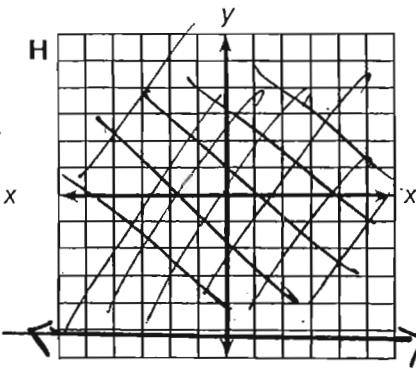
1. $2x - 3y \leq 2$; $(0, -1)$ $2(0) - 3(-1) \leq 2$ (F) NOT SOLUTION
 3. $5x + y \geq -3$; $(-3, 6)$ $5(-3) + 6 \geq -3$ (F) NOT SOLUTION
 5. $4y - 2x < 5$; $(2, 0)$ $4(0) - 2(2) < 5$ (T) SOLUTION

Graph the inequality in a coordinate plane.

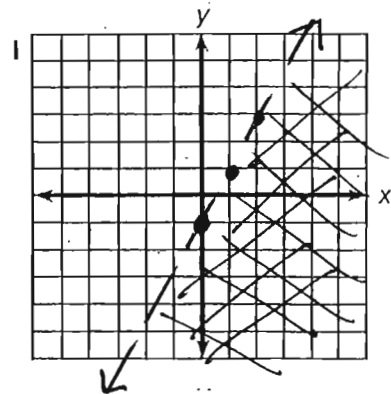
7. $x \geq 1$



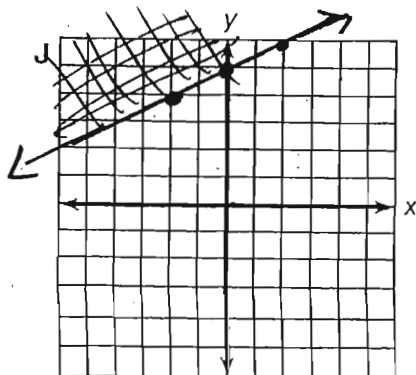
11. $y \geq -5$



13. $y < 2x - 1$

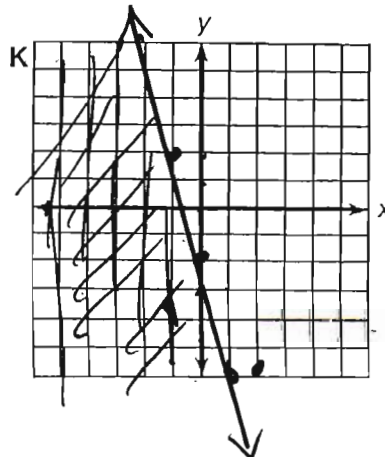


14. $y \geq \frac{1}{2}x + 5$



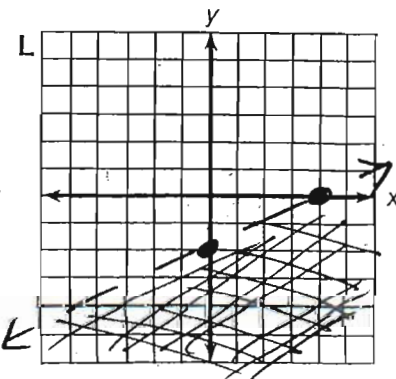
15. $4x + y \leq -2$

$y \leq -4x - 2$



19. $2x - 4y > 8$

$x > 4$
 $y < -2$



Practice A

For use with pages 114-120

Evaluate the function for the given value of x .

$$f(x) = \begin{cases} 3, & \text{if } x \leq 0 \\ 2, & \text{if } x > 0 \end{cases}$$

$$g(x) = \begin{cases} x + 5, & \text{if } x \leq 3 \\ 2x - 1, & \text{if } x > 3 \end{cases}$$

$$h(x) = \begin{cases} \frac{1}{2}x - 4, & \text{if } x \leq -2 \\ 3 - 2x, & \text{if } x > -2 \end{cases}$$

1. $f(2) = 2$

2. $f(-4) = 3$

3. $f(0) = 3$

4. $f\left(\frac{1}{2}\right) = 2$

5. $g(7) = 13$

6. $g(0) = 5$

7. $g(-1) = 4$

8. $g(3) = 8$

9. $h(-4) = -6$

10. $h(-2) = -5$

11. $h(-1) = 5$

12. $h(6) = -9$

Match the piecewise function with its graph.

E 13. $f(x) = \begin{cases} x - 4, & \text{if } x \leq 1 \\ 3x, & \text{if } x > 1 \end{cases}$

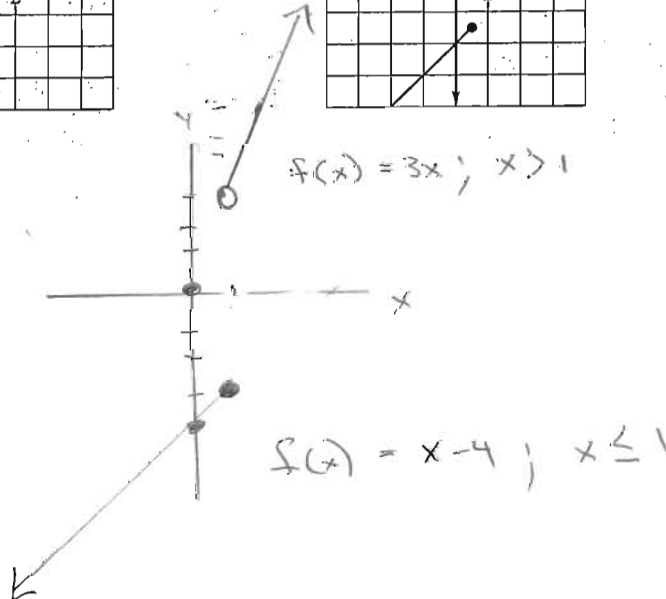
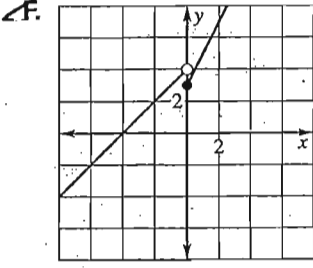
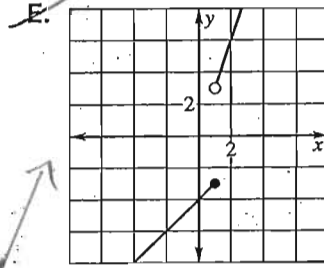
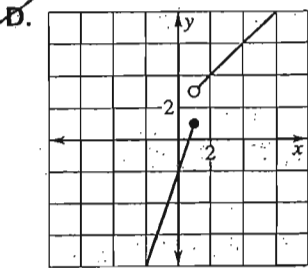
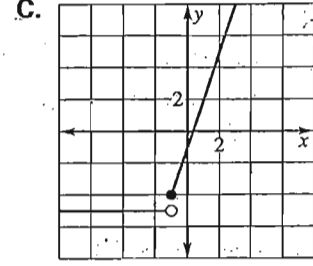
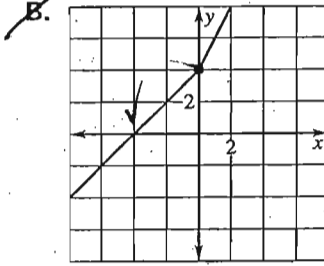
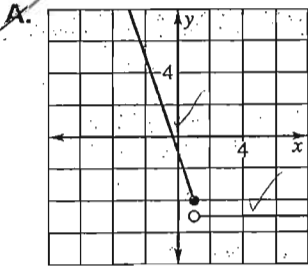
B 14. $f(x) = \begin{cases} x + 4, & \text{if } x \leq 0 \\ 2x + 4, & \text{if } x > 0 \end{cases}$

D 15. $f(x) = \begin{cases} 3x - 2, & \text{if } x \leq 1 \\ x + 2, & \text{if } x > 1 \end{cases}$

F 16. $f(x) = \begin{cases} 2x + 3, & \text{if } x \geq 0 \\ x + 4, & \text{if } x < 0 \end{cases}$

C 17. $f(x) = \begin{cases} 3x - 1, & \text{if } x \geq -1 \\ -5, & \text{if } x < -1 \end{cases}$

A 18. $f(x) = \begin{cases} -3x - 1, & \text{if } x \leq 1 \\ -5, & \text{if } x > 1 \end{cases}$



Practice A

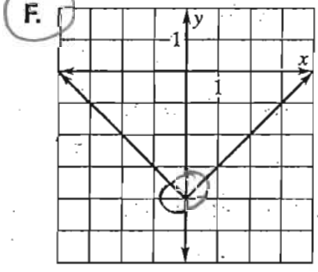
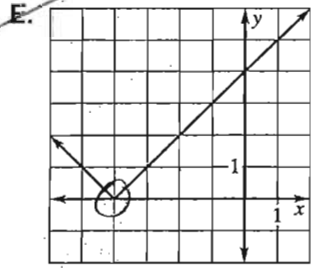
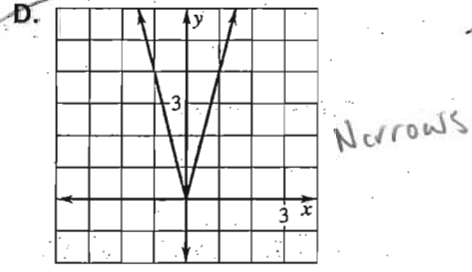
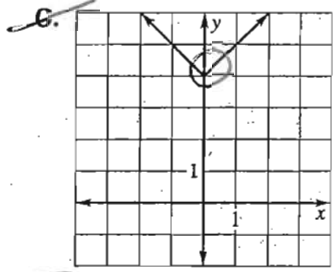
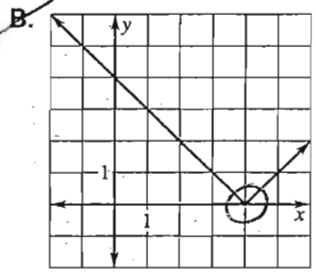
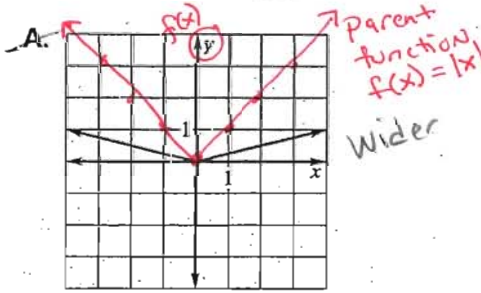
For use with pages 122-128

$$f(x) = a|x-h| + k$$

$\swarrow +a$ $\searrow -a$ Vertex (h, k)
 Take opposite

Match the function with its graph.

1. $f(x) = |x + 4|$ (E) Shift left 2. $f(x) = |x - 4|$ (B) Shift right 3. $f(x) = |x| + 4$ (C) UP 4
 4. $f(x) = |x| - 4$ (F) down 4 5. $f(x) = 4|x|$ (D) Narrows 6. $f(x) = \frac{1}{4}|x|$ (A) wider



Tell whether the graph of the function opens up or down.

7. $y = -3|x|$ DOWN 8. $y = 3|x + 1|$ UP 9. $y = |x + 1| - 10$ UP
 10. $y = -4|x - 1| + 3$ UP 11. $y = -2|x + 1| + 7$ DOWN 12. $y = -|x - 2| + 4$ DOWN
- implied* (under the minus sign in 12)

Identify the vertex of the graph of the given function.

13. $y = 2|x| - 3$ $(0, -3)$ 14. $y = |x - 1| + 2$ $(1, 2)$ 15. $y = |x + 3| - 5$ $(-3, -5)$
 16. $y = |x - 7| - 2$ $(7, -2)$ 17. $y = 2|x + 1| + 9$ $(-1, 9)$ 18. $y = -5|x + 3|$ $(-3, 0)$

Tell whether the graph of the function is wider, narrower, or the same width as the graph of $y = |x|$.

19. $y = |x - 8|$ SAME 20. $y = 2|x - 1|$ NARROWS 21. $y = \frac{1}{2}|x + 3| - 2$ wider
 22. $y = -3|x + 1| + 7$ NARROWS 23. $y = -\frac{2}{3}|x - 6| + 3$ NARROWS 24. $y = \frac{9}{10}|x| + 13$ NARROWS