

Practice: Get Ready

Algebraic Expressions

1. Simplify by collecting like terms.

- a) $4x + 2 - 3x + 16$
- b) $-3t - 10 + 14 - 2t$
- c) $8 + 6k - 12 - 9k$
- d) $5m + 12m - 2 - 2$
- e) $9y - 17 - 20y + 5$
- f) $8 - 8 - 13n + 25n$

Manipulate and Solve Equations

2. Rearrange each equation to isolate y .

- a) $2x + y = -8$
- b) $x + 3y = 5$
- c) $10x - 4y = 4$
- d) $-3x - y = 9$
- e) $4x + 5y = -2$
- f) $-x + 6y + 7 = 0$

3. For each equation, find the value of y when $x = 2$

- a) $y = 5x - 8$
- b) $y = -3x + 17$
- c) $x - y = -14$
- d) $2x + y = 9$
- e) $-7x + 3y = 10$
- f) $6x - 2y = 7$

4. For each equation, find the value of x when $y = -3$

- a) $y = x - 12$
- b) $y = -4x + 13$
- c) $x + 8y = -5$
- d) $3x - 10y = 3$
- e) $-2x + 6y = 2$
- f) $-4x - 2y - 14 = 0$

Graph Linear Relations

5. Graph each linear relation.

- a) $y = x + 3$
- b) $y = 2x - 9$
- c) $y = -x - 7$
- d) $y = -3x + 6$
- e) $y = 4x + 1$
- f) $y = -6x - 2$

6. Rewrite each equation in slope y -intercept form.

- a) $2x - y = 10$
- b) $-3x + y = 4$
- c) $6x + y = -7$
- d) $x - y = 3$
- e) $5x - y = -5$
- f) $x + y = 6$

Translate Words to Algebra

7. Write an equation to represent each situation.

- a) Jill earns \$9.25/h. Last week she earned \$74.
- b) Arman paid \$205 to rent a car for the weekend. The rental company charges \$100 plus \$0.25/km
- c) The \$125 pair of running shoes costs \$142.50 after the sales taxes is included.
- d) The phone company charges 20¢ per minute for long distance calls. Michael's phone bill shows \$58 in long-distance calls.
- e) The area of the circle is 24 cm^2 .