
Looking Ahead to Chapter 5

Focus

In Chapter 5, you will learn how to write linear equations in a variety of forms. You will learn what the different pieces of a linear equation represent, and how they apply to real-life situations.

Chapter Warm-up

Answer these questions to help you review skills that you will need in Chapter 5.

Evaluate the equation $y = 3x - 17$ for each value of x .

1. $x = 3$ $y =$

2. $x = 0$ $y =$

3. $x = -8$ $y =$

Evaluate the equation $y = -7x + 24$ for each value of x .

4. $x = -4$ $y =$

5. $x = 14$ $y =$

6. $x = -9$ $y =$

Solve each inequality. Show your work.

7. $3x - 5 < 19$

8. $8x + 20 \geq 36$

9. $16 < 4 + 7x$

Read the problem scenario below. Show your work.

In order to entice people to work for them, a local used car lot advertises that it will pay a commission to its employees in the amount of 12% of the employee's total sales for each month.

12% of sales is commission

10. How much in total sales would an employee have to sell in one month to earn \$2700 in commission?

11. How much would an employee earn in commission if they sold \$76,000 worth of used cars in one month?

Solve.

1. $a - 5 = 13$

$a = 18$

4. $5m = 35$

2. $x + 9 = 24$

5. $2x - 7 = 9$

3. $3b = 24$

6. $3y + 4 = 19$

7. $\frac{b}{2} = 7$

8. $\frac{x}{3} = 13$

9. $\frac{m}{4} = 7$

10. $5a + 9 = 29$

11. $3x - 11 = 52$

12. $8y - 15 = 41$

13. $12a - 7 = 17$

14. $19 = x + 7$

15. $25 = b - 9$

16. $3n + 4 = 40$

17. $6x - 9 = 21$

18. $4s - 11 = 41$

19. $\frac{a}{5} = 14$

20. $\frac{m}{7} = 21$

21. $\frac{x}{6} = 12$

22. $9n + 4 = 58$

23. $5x + 7 = 52$

24. $3m - 7 = 32$

Write an equation. Solve for the variable.

25. 7 more than twice a number is 25.

26. The difference between $9y$ and $3y$ is 42.

Complete.

27. Lea is 5 cm taller than Jose.

Let x = Jose's height in centimeters.

Then $\frac{?}{x+5}$ = Lea's height.

28. Amy is 3 years older than Becky.

Let a = Amy's age.

Then $\frac{?}{?}$ = Becky's age.

29. Jake has \$3 more than Marie.

Marie has \$6 more than Hank.

Let h = Hank's amount of money.

Then $\frac{?}{?}$ = Marie's amount of money,
and $\frac{?}{?}$ = Jake's amount of money.

Use the distributive property to simplify.

1. $3(2x - 5)$

$6x - 15$

2. $5(6 - 2a)$

3. $8(2x - 5)$

4. $7(3 - 5a)$