

1-1 Study Guide and Intervention**Variables and Expressions**

Write Verbal Expressions An **algebraic expression** consists of one or more numbers and variables along with one or more arithmetic operations. In algebra, **variables** are symbols used to represent unspecified numbers or values. Any letter may be used as a variable.

Example Write a verbal expression for each algebraic expression.

a. $6n^2$

the product of 6 and n squared

b. $n^3 - 12m$

the difference of n cubed and twelve times m

Exercises

Write a verbal expression for each algebraic expression.

1. $w - 1$

2. $\frac{1}{3}a^3$

3. $81 + 2x$

4. $12d$

5. 8^4

6. 6^2

7. $2n^2 + 4$

8. $a^3 \cdot b^3$

9. $2x^3 - 3$

10. $\frac{6k^3}{5}$

11. $\frac{1}{4}b^2$

12. $7n^5$

13. $3x + 4$

14. $\frac{2}{3}k^5$

15. $3b^2 + 2a^3$

16. $4(n^2 + 1)$

1-1 Study Guide and Intervention *(continued)****Variables and Expressions***

Write Algebraic Expressions Translating verbal expressions into algebraic expressions is an important algebraic skill.

Example Write an algebraic expression for each verbal expression.

a. four more than a number n

The words *more than* imply addition.

four more than a number n

$$4 + n$$

The algebraic expression is $4 + n$.

b. the difference of a number squared and 8

The expression *difference of* implies subtraction.

the difference of a number squared and 8

$$n^2 - 8$$

The algebraic expression is $n^2 - 8$.

Exercises

Write an algebraic expression for each verbal expression.

1. a number decreased by 8
2. a number divided by 8
3. a number squared
4. four times a number
5. a number divided by 6
6. a number multiplied by 37
7. the sum of 9 and a number
8. 3 less than 5 times a number
9. twice the sum of 15 and a number
10. one-half the square of b
11. 7 more than the product of 6 and a number
12. 30 increased by 3 times the square of a number