

Homework Practice 1-1: Variables & Expressions

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. Identify the coefficient, constant & variable also.

1. $w - 1$

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

3. $81 + 2x$

4. $12d$

5. 8^4

6. 6^2

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

8. $4(n^2 + 1)$

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. Identify the coefficient, variable & constant also.

9. a number decreased by 8

10. a number divided by 8

11. a number squared

12. four times a number

13. a number divided by 6

14. a number multiplied by 37

15. the sum of 9 and a number

16. twice the sum of 15 and a number