

Writing Expressions and Equations

Algebraic Expression: Contains at least 1 variable and 1 operation (+, -, ×, ÷).

Numerical Expression: Contains only numbers and operations.

Variable: The unknown.

Key phrases:

Addition:

Plus

The sum of

Increased by

More than

The total of

Subtraction:

Minus

The difference of

Decreased by

Less than

Fewer than

Multiplication:

Times

The product of

at

of

Division:

Divided by

The quotient of

The ratio of

Ex. 1: Write an algebraic expression for each verbal expression.

a) the sum of m and 18

$$m + 18$$

b) the product of k and 12

$$12k$$

c) d divided by w

$$\frac{d}{w}$$

d) 26 decreased by y

$$26 - y$$

e) 5 less than m

$$m - 5$$

f) 7 more than the quotient of p and 12

$$7 + \frac{p}{12}$$

Ex. 2: Write a verbal expression for each algebraic expression.

a) $15v$

15 times v

b) $37 + s$

37 plus s

c) $(y \div 4) + 9$

y divided by 4, plus 9

d) $32 - b$

32 minus b

e) $r - \frac{t}{d}$

r minus the quotient of t and d

f) $5(b - 3)$

5 times the difference of b and 3

Equation: Contains an equals sign (=).

Ex. 3: Write an equation for each sentence.

a) Three times g equals 21

$$3g = 21$$

b) Five more than twice n is 15.

$$5 + 2n = 15$$

c) The quotient of k and 4 is equal to 18.

$$\frac{k}{4} = 18$$

Ex. 4: Write a sentence for each equation.

a) $x - 2 = 14$

x minus 2 equals 14

b) $7y + 6 = 34$

7 times y plus 6 equals 34

c) $\frac{y}{5} = 15$

y divided by 5 equals 15