

Algebraic Expression: an expression that may contain numbers, operations, and one or more symbols.

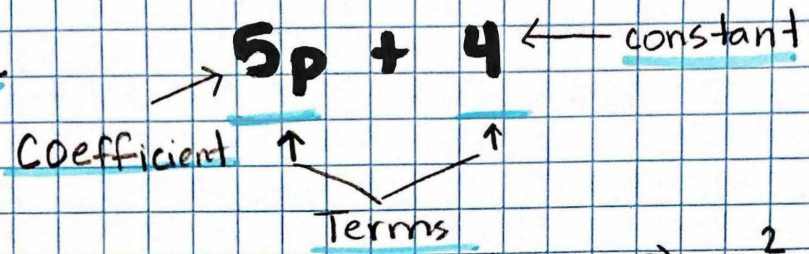
①

Terms: The parts of the algebraic expression.

Coefficient: The number that contains a variable

Constant: A term without a variable

Example



1) $12 + 10c$
 $T = 12, 10c$
 $Coe = 10c$
 $Con = 12$

2) $15 + 3w + \frac{1}{2}$
 $T = 15, 3w, \frac{1}{2}$
 $Coe = 3$
 $Con = 15, \frac{1}{2}$

3) $z^2 + 9z$
 $T = z^2, 9z$
 $Coe = 9, 1$
 $Con = \text{none}$

② Writing Algebraic Expressions Using Exponents

a) $d \cdot d \cdot d \cdot d = d^4$

b) $1.5 \cdot h \cdot h \cdot h = 1.5h^3$

c) $j \cdot j \cdot j \cdot j \cdot j \cdot j = j^6$

d) $9 \cdot k \cdot k \cdot k \cdot k = 9k^4$

③ Evaluate

b) $4n$ when $n = 12$
 $4 \cdot 12 = 48$

a) $K + 10$ when $K = 25$
 $25 + 10 = 35$

d) $d - 17$ when $d = 30$
 $30 - 17 = 13$

c) $24 + c$ when $c = 9$
 $24 + 9 = 33$

①

3:1 Algebraic Expressions

④ Evaluate with two variables

$$a \div b \quad a = 16 \quad b = \frac{2}{3}$$

$$\frac{16}{1} \div \frac{2}{3} \Rightarrow \frac{16}{1} \times \frac{3}{2} = 24$$

Try it! $p = 24$ $q = 8$

1) $p \div q$
 $24 \div 8 = 3$

2) $q + p$
 $8 + 24 = 32$

3) $p - q$
 $24 - 8 = 16$

4) pq
 $24 \cdot 8 = 192$

⑤ Evaluate with two operations

$$3x - 14 \quad \text{when } x = 5$$

$$3 \cdot 5 = 15$$

$$15 - 14 = 1$$

try it! $y = 6$

1) $5y + 1$

$5(6) + 1$

31

2) $30 - 24 \div y$

$30 - 24 \div 6$

26

3) $y^2 - 7$

$6^2 - 7$

$36 - 7 =$ 29

4) $1.5 + y^2$

$1.5 + 6^2$

$1.5 + 36$

37.5