



multiply subtract

Ex) In the expression $12r - 8$,
 - 8 is the **constant**
 - 12 is the coefficient
 - r is the variable

What operations are in this expression?

→ multiplication
 → subtraction

If $r = 2$ then what does $12r - 8$ equal?

$$\begin{array}{r} 12(2) - 8 \\ \hline 24 - 8 \\ 16 \end{array}$$

Recall

Coefficient--> is the # in front of the letter (It is being multiplied)

Variable--> is a letter that represents a number that changes

Constant --> a number that is alone either added or subtracted

Ex) $3 - 5x$

Coeff: -5

Var: x

constant: 3

Remember if there is no # in front of a letter it is understood to be 1

Ex) $m + 13$

coeff: 1

var: m

Constant--> 13

Review

Variables, Constants & Coefficients

★ A constant is value that never changes. (A Number)

Ex) There will always be 7 days in a week,

★ A variable is a value that changes. (Letter)

Ex 1) The number of students present in grade 7 class can change from day to day, or

Ex 2) the number of days it rains in one week changes.

- a letter that represent the unknown value

Ex 1) Let p represents the number of students absent from school today.

Ex 2) Let a represent the teacher's age.

★ A coefficient is a number in front of the variable
represents repeated addition

Repeated Addition is when you write the variable being added to itself.

Example) $3c = c + c + c$

$$5w = w + w + w + w + w$$

Review

Often we translate phrases into expressions in math.

★ Algebraic expression contains a variable and an operation.

There are certain words that we associate with the different operations:

<u>Addition</u>	<u>Subtraction</u>	<u>Multiplication</u>	<u>Division</u>
sum plus increased by	difference minus decreased by reduced by	product times double, twice of triple	quotient divided by

Review

When using variables, you do not always have to include the times sign, it is assumed to be there.

Ex 1) $6n$ means $6 \times n$

Ex 2) $12t$ means $12 \times t$.

You can simply write the number followed by the variable. (Note: you can not write the variable first, without the times sign. You can not write $b4$, it has to be written as $4b$ or $b \times 4$).

Ex1) $7 - 2r$

Coefficient: -2Variable: rConstant: 7

Ex 2) $16 + k$

Coefficient: 1Variable: kConstant: 16

You try

Let $n \equiv$ a number

Always state what your variable represents

1. Translate the following it to an algebraic expressions:

(a) a number reduced by 20

$$\underline{n} - 20$$

(b) 7 more than a number

$$\underline{n} + 7 \quad \text{or} \quad 7 + n$$

(c) the product of 3 and a number

$$\begin{array}{c} \downarrow \\ \text{multiply} \end{array} \quad \underline{3n} \quad \text{or} \quad 3 \times n \quad \text{or} \quad n \times 3$$

(d) The sum of a number and 50

$$\begin{array}{c} \downarrow \\ \text{add} \end{array} \quad n + 50$$

(e) 6 times a number reduced by 9

$$6 \times n - 9 \quad \text{or} \quad 6n - 9$$

2. Write the following algebraic expressions as words:

(a) $4r + 7$

4 times a number plus 7

(b) $10m$

a number multiplied by 10

(c) $J/6$

a number divide by 6

(d) $6 - h$

6 Subtract a number

Or

a number subtracted from 6

Class/Homework



Page 18

#1(a,b,c,d)

#2

Check Page 346 answers

#3(a,b,c,d)

(section 1.3 page 18)

#4(a,b)

#5(a,b,c,d,e) define your variable

6(a,b) define your variable

Try 7(a,b,c)