

Writing/Translating Expressions and Equations

To translate statements into expressions and equations:

- 1) Identify **KEY WORDS** that indicate the operation.
- 2) Write the numbers/variables in the correct order.

KEY WORDS

The **SUM** of _____ and _____ : _____

The **DIFFERENCE** of _____ and _____ : _____

The **PRODUCT** of _____ and _____ : _____

The **QUOTIENT** of _____ and _____ : _____ or

Write each verbal phrase as an algebraic expression.

1. the sum of 8 and t
2. the quotient of g and 15
3. the product of 5 and b
4. the difference of 32 and x

KEY WORDS

LESS THAN

MORE THAN

**SWITCH THE
ORDER OF
THE TERMS!**

the first number subtracted
from the second!

5. Eight more than x _____
6. Six less than p is 42 _____

Write the phrase **five dollars less than Jennifer earned** as an algebraic expression.

Key Words	<i>five dollars less than Jennifer earned</i>
Variable	Let d represent # of \$ Jennifer earned
Expression	$d - 5$

6. 14 less than f
7. p more than 10
8. 3 more runs than Pirates scored
9. 12 less than some number
10. Arthur is 8 years younger than Tanya
11. Kelly's test score is 6 points higher than Mike's

KEY WORDS

IS, equals, is equal to

Substitute with equal sign.

7. 5 more than a number is 6.

8. The product of 7 and b is equal to 63.

9. The sum of r and 45 is 79.

10. The quotient of x and 7 is equal to 13.

KEY WORDS

TWICE = DOUBLE = 2 times a number = multiply by 2

Addition Phrases	Expression	Subtraction Phrases	Expression
8 more than a number The sum of 8 and a number x increased by 8 the total of x and 8	$x + 8$	The difference of r and 6 r decreased by 6 6 less than a number 6 subtracted from a number	$r - 6$
Multiplication Phrases	Expression	Division Phrases	Expression
Twice a number The product of 2 and n 2 multiplied by a number 2 times a number	$2n$	The quotient of z and 3 A number divided by 3 The ratio of z and 3	$\frac{z}{3}$

Practice: Underline key words. Write each phrase as an algebraic expression or equation.

11. Seven less than a number is 15

12. The total of 5 and c

13. 7 less than m

14. The sum of a number and 16 is 23

15. the score increased by 8 points

16. The quotient of w and 10 is equal to 7

18. 17 more than some number is 57

19. \$12 less than the original price is \$48

20. twice as many points as Bob has

21. (-65) is 5 times a product of 5 and a number

Translate each expression or equation into a word expression or statement.

22) $9y$ _____

23) $x - 8 = 14$ _____

24) $\frac{y}{12} = 24$ _____

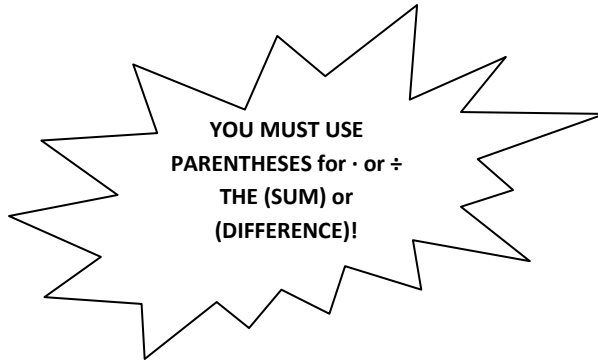
Writing Two-Step Expressions and Equations

Six less than twice a number x is four

Two less than the quotient of 15 and a number

Nine times a number decreased by four

Five times the sum of six and some number



Twice the difference of y and three

The quotient of 7 and d decreased by 9

The **sum of 5 and** the product of 7 and x

The difference of 9 and the quotient of s and -4

The product of 4 and the difference of x and 3

The product of the difference of x and 3 and 4

7. Five less than twice a number is 7. _____

8. One less than the product of four and a number is 11. _____

9. Ten more than the quotient of a number and 3 is 12. _____

10. The sum of 9 and the quotient of x and 7 is 11. _____

11. The product of 2 and the sum of 5 and t is 8. _____

12. Ten less than the quotient of a number and -2 is three _____

13. $7(b + 2)$ _____

14. $2c - 5$ _____

Translate:

- 1. Seven more than the quotient of a number and 2 is 10.
- 2. Six less than six times a number is 12.
- 3. The product of 8 and the difference of n and 3.
- 4. Seven more than twice a number is 1.

Identify the terms, variables, coefficients, and constants in each expression.

5. $-3a - 2b + 6c + 9$

Terms:

Variables:

Coefficients:

Constants:

6. $4z + 3 - 2z - z$

Terms:

Variables:

Coefficients:

Constants:

Write an example of:

- 7. equation:
- 8. inequality:
- 9. expression:

Multiply monomials:

- 10. $(-3)6a =$
- 11. $-6(-2d) =$
- 12. $(-7x)(-5) =$

Translate:

- 13) $k + 12$ _____
- 14) $17(y + 11)$ _____
- 15) $3b - 8$ _____

- 16. The sum of a number and 16 is equal to 45.
- 17. The product of 6 and m is 216.
- 18. The difference of 100 and x is 57.
- 19. The quotient of z and 10 increased by 32.
- 20. \$18 less than the original price is \$48.
- 21. 17 more than some number is equal to 85.
- 22. The number of members divided by 6 is 15.
- 23. The total of Joshua's savings and \$350 is \$925.