

TOPIC: TRANSLATING PHRASES TO EXPRESSIONS

Translating Word Phrases to Expressions

◆ To translate phrases to algebraic expressions, identify *keywords* to represent with _____ & _____.

Operation/Symbol	Common Keywords	Example
Variable	<i>A number, a quantity, (an unknown) value</i>	
Addition	<i>Sum, _____ by, _____ than, plus</i>	Five more than a number
Subtraction	<i>Difference, _____ by, _____ than, minus</i>	A number decreased by 7
Multiplication	<i>_____, times, of, twice/double/triple</i>	The product of an unknown value and $\frac{1}{2}$
Division	<i>_____, divided by, per, out of</i>	Eleven divided by a number

EXAMPLE

Translate the following phrase into an algebraic expression.

The quotient of a number and three increased by seven.

PRACTICE

Let A be the number. Translate the following phrases into algebraic expressions.

(A) the sum of 17 and a number	(B) negative nineteen times a number	(C) a number divided by 50
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PRACTICE

Write the following as algebraic expressions.

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| <p>(A) negative three times the value of x increased by 5</p> | <p>(B) one half of the difference between y and 4</p> | <p>(C) negative four divided by the sum of a and $\frac{5}{2}$</p> |
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EXAMPLE

Write an algebraic expression that represents each situation.

- (A) Noah buys x notebooks for \$3 each and a pencil for \$1.50. Write an algebraic expression that represents the total cost.
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- (B) A water tank that contains 10 liters of water. It is being filled at a rate of r liters per minute. Write an expression that represents the amount of water in the tank after t minutes.