

## Lesson 5.2 Parts of an Expression

A **variable** is a symbol, usually a letter of the alphabet, that stands for an unknown number, or quantity.  $a = \text{variable}$

An **algebraic expression** is a combination of numbers, variables, and at least one operation.  $x + 13$

A **term** is a number, variable, product, or quotient in an algebraic expression. In  $3a + 5$ ,  $3a$  is a term and  $5$  also is a term.

The term  $3a$  means  $3 \times a$ . The number  $3$  is the coefficient of  $a$ . A **coefficient** is a number that multiplies a variable. In the expression  $x + 5$ , the coefficient of  $x$  is understood to be  $1$ .

An **equation** is a sentence that contains an equal sign.  $x + 13 = 25$

Identify each of the following as an *expression* or an *equation*.

- |                       |                    |                         |
|-----------------------|--------------------|-------------------------|
| <b>a</b>              | <b>b</b>           | <b>c</b>                |
| 1. $3 + x$ _____      | $7 + 4 = 11$ _____ | $55 \times n$ _____     |
| 2. $x - 7 = 15$ _____ | $b - 45$ _____     | $24 = 6 \times 4$ _____ |

For each term below, identify the coefficient and the variable.

- |  |                                       |
|--|---------------------------------------|
| <b>a</b>                                 | <b>b</b>                              |
| 3. $3x$ coefficient _____ variable _____ | $4y$ coefficient _____ variable _____ |
| 4. $z$ coefficient _____ variable _____  | $5n$ coefficient _____ variable _____ |
| 5. $7b$ coefficient _____ variable _____ | $m$ coefficient _____ variable _____  |
| 6. $r$ coefficient _____ variable _____  | $6d$ coefficient _____ variable _____ |

Translate each phrase into an algebraic expression.

- |                             |                                   |
|-----------------------------|-----------------------------------|
| 7. five more than $n$ _____ | eight decreased by $x$ _____      |
| 8. $x$ added to seven _____ | the product of $n$ and $11$ _____ |

Translate each sentence into an equation.

- |  |   |
|--|---|
| 9. Six times a number is $18$ . _____        | Seventy less a number is $29$ . _____       |
| 10. Eight divided by a number is $2$ . _____ | The product of $7$ and $12$ is $84$ . _____ |

Write the following expressions in words.

- |                              |
|------------------------------|
| 11. $6 - n = 3$ _____        |
| 12. $5 \times 13 = 65$ _____ |

## Math 6 - Unit 3: Expressions

### Translating Expressions Practice

Name: \_\_\_\_\_

Class Period: 1 2 3 4 Date: \_\_\_\_\_

#### Translate the words to symbols.

- |  |           |
|--|-----------|
| 1) A number minus 18                       | 1) _____  |
| 2) A number decreased by 16                | 2) _____  |
| 3) 9 less than a number                    | 3) _____  |
| 4) Six increased by a number               | 4) _____  |
| 5) Six more than twice a number            | 5) _____  |
| 6) The sum of 7 and a number               | 6) _____  |
| 7) 8 divided by a number                   | 7) _____  |
| 8) The product of a number and thirteen    | 8) _____  |
| 9) The sum of a number and 10              | 9) _____  |
| 10) The quotient of a number and 12        | 10) _____ |
| 11) The product of a number and 3, minus 2 | 11) _____ |

#### Translate the symbols to words.

- |              |           |
|--------------|-----------|
| 12) $x + 5$  | 12) _____ |
| 13) $5x$     | 13) _____ |
| 14) $5n + 4$ | 14) _____ |
| 15) $n - 6$  | 15) _____ |
| 16) $2n + 6$ | 16) _____ |

## Math 6 - Unit 3: Expressions

### Translating Expressions Practice

#### ANSWER KEY (Back Side)

#### Translate the words to symbols.

1) A number minus 18

2) A number decreased by 16

3) 9 less than a number

4) Six increased by a number

5) Six more than twice a number

6) The sum of 7 and a number

7) 8 divided by a number

8) The product of a number and thirteen

9) The sum of a number and 10

10) The quotient of a number and 12

11) The product of a number and 3, minus 2

#### Translate the symbols to words. **These are sample answers. Your answers may vary.**

12)  $x + 5$

12) The sum of a number and five

13)  $5x$

13) The product of five and a number

14)  $5n + 4$

14) The sum of the product of five and a number and four

15)  $n - 6$

15) Six less than a number.

16)  $2n + 6$

16) The product of 2 and a number increased by 6

Name: \_\_\_\_\_

Class Period: 1 2 3 4 Date: \_\_\_\_\_

1)  $x - 18$

2)  $x - 16$

3)  $n - 9$

4)  $6 + n$

5)  $2n + 6$

6)  $7 + n$

7)  $\frac{8}{n}$

8)  $13n$

9)  $n + 10$

10)  $\frac{n}{12}$

11)  $3n - 2$

Front Side Answers			
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	a	b	c
1.	expression	equation	expression
2.	equation	expression	equation
3.	3; x	4; y	
4.	1; z	5; n	
5.	7; b	1; m	
6.	1; r	6; d	
7.	$n + 5$	$8 - x$	
8.	$x + 7$	$n \times 11$	
9.	$6n = 18$	$70 - n = 29$	
10.	$\frac{8}{n} = 2$	$7 \times 12 = 84$	
11.	six decreased by a number is equal to three		
12.	the product of five and thirteen is equal to 65		