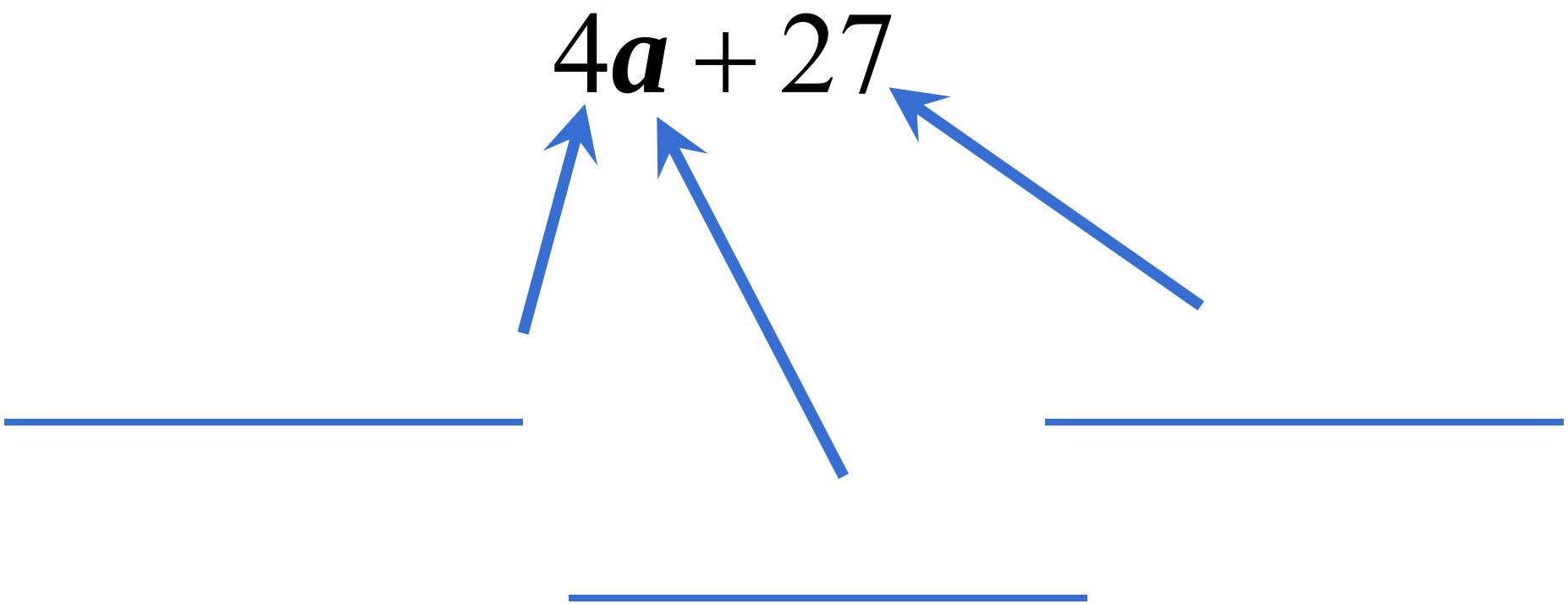
Chapter 3 Review

Parts of Algebraic Expressions

An _____ _____ is a mathematical phrase that may contain numbers, operations, and one or more symbols.



The _____ of an algebraic expression are the parts that are separated by addition.

Review: Parts of Alg. Expressions

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

1) $5x^2 + 63 + 6y^2$

Terms: _____

Coefficients:_____

Constants:_____

2) $8a^2 + 9b + \frac{3}{5}c^2$

Terms: _____

Coefficients:_____

Constants:_____

Evaluating Algebraic Expressions

Evaluate the expression when $x = 20$ and $y = 4$.

1) $x \div 5$

2) $y + x$

3) $8y - x$

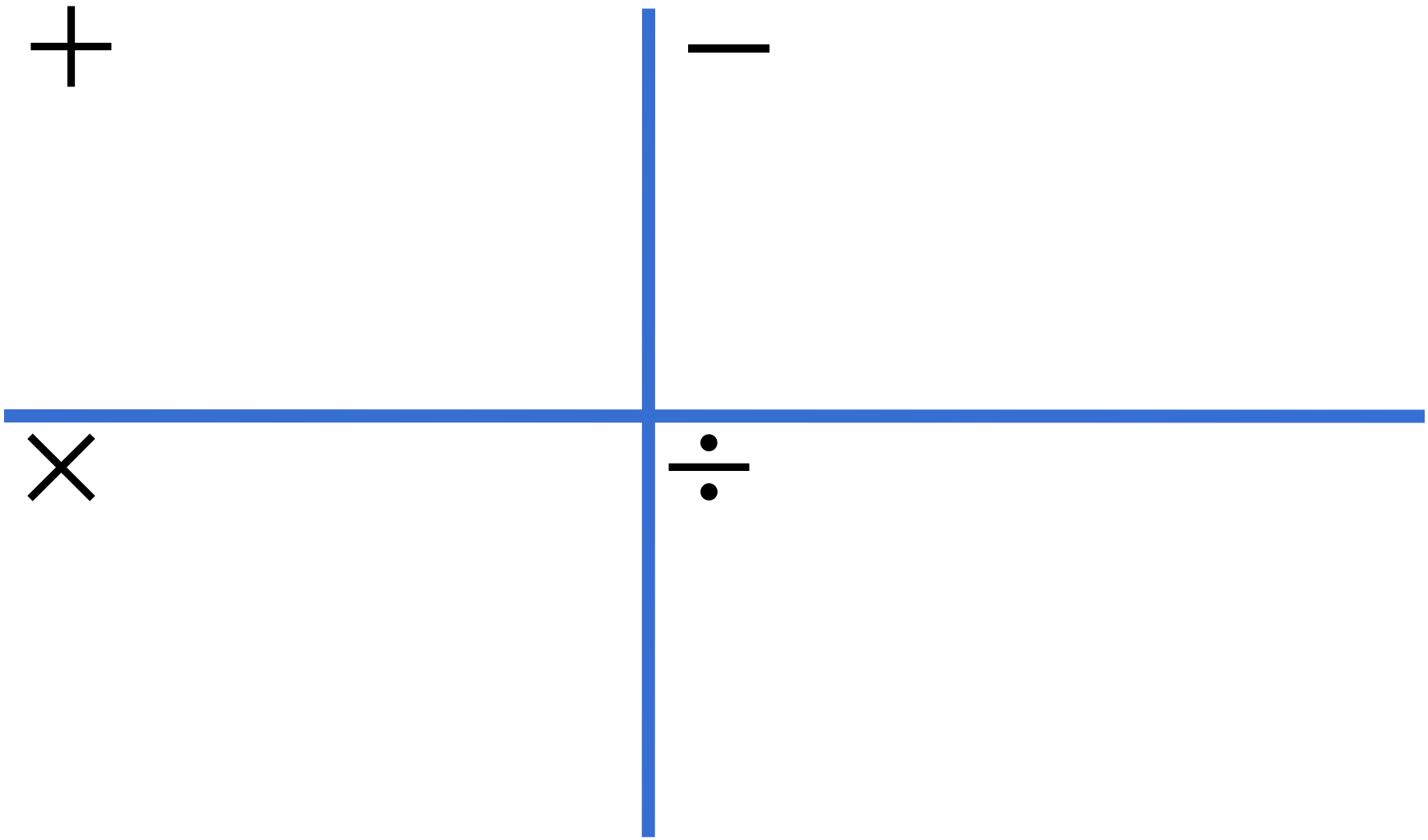
Evaluating Algebraic Expressions

4) In a video game, you score p game pointsand b triple bonus points. An expression for your score is $p + 3b$. What is your score when you earn 245 game points and 20 triple bonus points?

Key Vocabulary

Algebraic Expression
Coefficient
Constant
Term
Evaluate

Key Words



Translating variable expressions

Write the phrase as an expression.

1) 11 fewer than a number *b*

2) the product of a number *d* and 32

3) 18 added to a number *n*

4) a number *t* decreased by 17

Do the following:

5) Your basketball team scored 4 fewer than twice as many points as the other team.

   a. Write an expression for the number of points your team scored.

   b. The other team scored 24 points. How many points did your team score?

THE COMMUTATIVE PROPERTY

"Commute" - _____

The property means that we _____ _____ terms and that the _____ _____ _____ _____.

$$7 + 8 = 8 + 7$$

$$3 \times 4 = 4 \times 3$$

$$a + b = b + a$$

$$12 \times a = a \times 12$$

The commutative property only works for addition and multiplication.

THE ASSOCIATIVE PROPERTY

"Associate" - _____

That property means that the _____ of terms does not _____ ___ _____ .

$$(7+8)+2 = 7+(8+2)$$

$$(a+b)+c = a+(b+c)$$

$$(3 \times 4) \times 2 = 3 \times (4 \times 2)$$

$$(a \times b) \times c = a \times (b \times c)$$

The associative property only works for addition and multiplication.

Addition Property of Zero

The _____ of any _____ and _____ is that number.

$$7 + 0 = 7$$

$$0 + 8 = 8$$

$$a + 0 = a$$

Multiplication Property of Zero

The _____ of any _____ and _____ is _____ .

$$7 \times 0 = 0$$

$$0 + 9 = 0$$

$$a \times 0 = 0$$

Multiplication Property of One

The _____ of any _____ and _____ is that number.

$$4 \times 1 = 4$$

$$1 \times 13 = 13$$

$$a \times 1 = a$$

DO YOU UNDERSTAND?

Identify the property being used.

1) $(x+18)+4=x+(18+4)$

2) $9 \cdot 7 = 7 \cdot 9$

3) $36 \times 1 = 36$

4) $9+0=9$

Using Properties to Write Equivalent Expressions

Simplify the expression. Explain each step.

1) $10 + (2 + y)$

2) $(21 + b) + 1$

Using Properties to Write Equivalent Expressions

Simplify the expression. Explain each step.

3) $1(3.2w)$

4) $5.3+(w+1.2)$

Using Properties to Write Equivalent Expressions

Simplify the expression. Explain each step.

3) $(6.1 + x) + 8.4$

4) $5(11y)$

Review – The Distributive Property

Use **the Distributive Property to simplify the expression.**

1) $2(x+12)$

2) $11(b-3)$

3) $12(5+k+3)$

Simplifying Using the Distributive Prop.

Use **the Distributive Property to simplify the expression.**

4) $t + 2(1 + 3t)$

5) $5(n + 3) + 4n$