Unit 2 – Day 1 – Intro to Algebra and Collecting like Terms

Useful terms:

Let’s learn some algebraic terms:

A *variable* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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A *term* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Algebraic Expressions* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Like Terms* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Unlike Terms* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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A *coefficient* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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A *constant term* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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If an algebraic expression has like terms, we are interested in putting them together. This process is called collecting like terms, or simplifying.

**Example:** Identify the like terms in the following list:

2x2 -4xy2 10 -4x2 5xy 7yx2 6 3x2y 8y2x

**Example:** Identify the number of terms in each of the following.

a) 4x + 5y – 7 b) abc + def – ghi + 10

c) xy2 + 3 – xy d) 3b2 – 4ab + 7 + 19ba

When we are asked to simplify, that means to use less paper, less space, less graphite. We want to identify the like terms and put them together by adding or subtracting the coefficients.

**Example:** Simplify each of the following by collecting like terms.

a) 10x – 4y + 3x + y b) 4p2 + p – 10p – 5p2

c) 3x – 4 + 7y + 4x – 5 d) -14 + 3a + 5b – a – 5b + 4 – 7a + b

e) 6st2 + 4st – 3ts2 + 10 – 5s + 3ts – 8ts2 + 3t2s – 4

**Example:** Determine a simplified expression for the perimeter of each of the following shapes.

x

x + y

2x

a)

a + b + c + d

a - c

3a + 2b - d

b)

a + b

2a + b + c

d

2a + b

a - b

2c

a

Page 300, 301 #1-29 odds, 43-55 odds, 58a,c.