**Lesson 17 Notes: Multiplication of Integers**

**Answer Key**

-5 -4 -3 -2 -1 0 1 2 3 4 5

Whole numbers and their opposites

**What are Integers?**

Integers are “signed” numbers.

Integers are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Why do we need Integers?**

---- Can you think of a real-world example that uses negative numbers?

Bank Account, Temperature of weather, Score in Golf……

-8 x 2 = -16 -8 x 2 = -16

NEGATIVE

POSITIVE

8 x 2 = 16 -8 x -2 = 16

**Multiplication of Integers**

When multiplying two numbers with the same sign,

the product is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

When multiplying two numbers with unlike signs,

the product is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

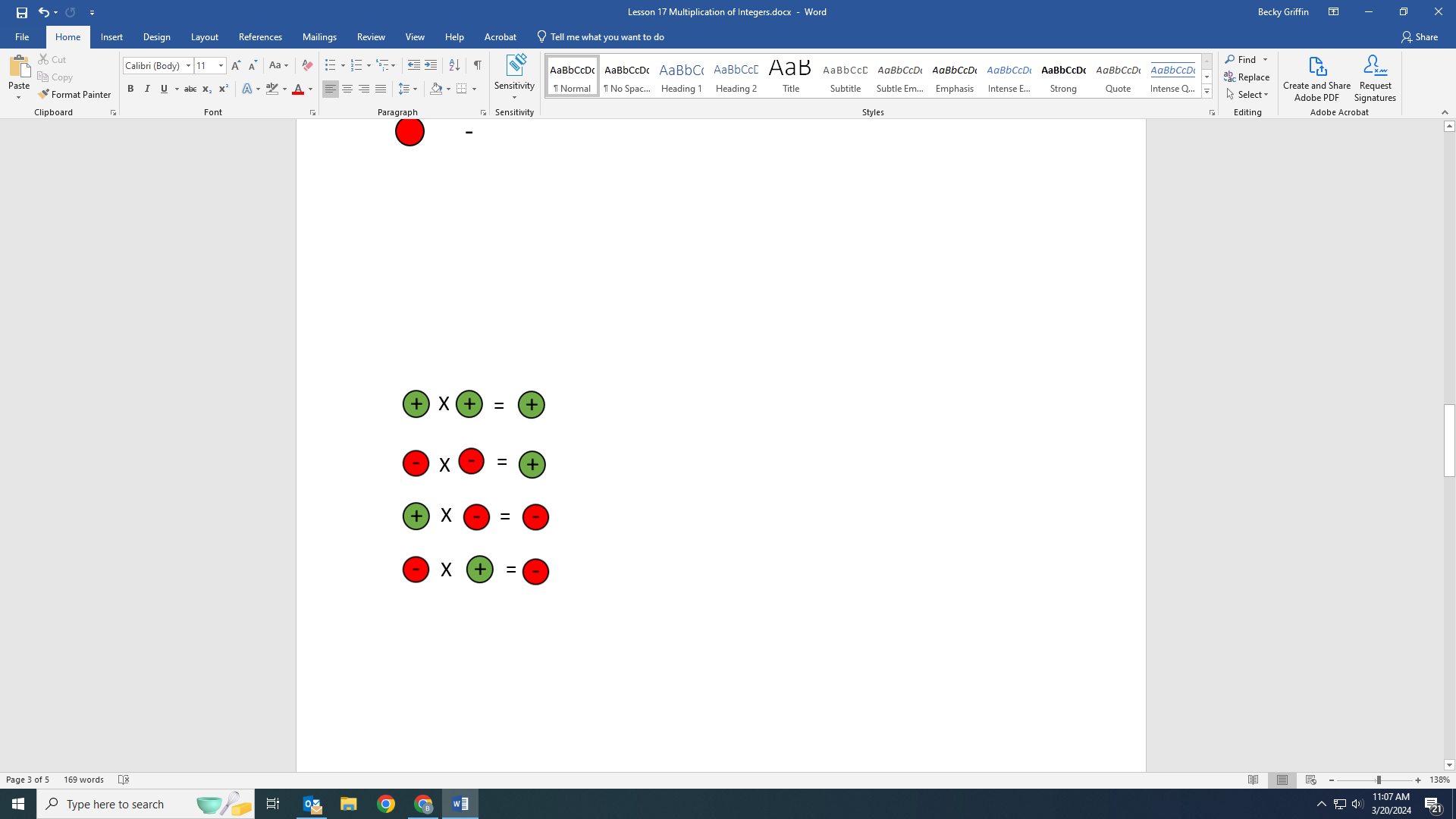
**Multiplication of Integers SUMMARY**

Positive X Positive = \_\_\_\_\_\_\_\_\_\_\_\_

Negative X Negative = \_\_\_\_\_\_\_\_\_\_\_\_

Positive X Negative = \_\_\_\_\_\_\_\_\_\_\_\_

Negative X Positive = \_\_\_\_\_\_\_\_\_\_\_\_



Positive

Positive

Negative

Negative

**What about integers raised to a power (exponent)?**

16

Example a: 24 = \_\_\_\_\_\_

-16

Example b: -24 = \_\_\_\_\_\_

16

Example c: (-2)4 = \_\_\_\_\_\_

-8

Example d: (-2)3 = \_\_\_\_\_\_

-8

Example e: -23 = \_\_\_\_\_\_

-1

Example f: -14 = \_\_\_\_\_\_

1

Example g: (-1)4 = \_\_\_\_\_\_

**Directions:** Find the product of each of the examples below. Show work.

15

**Example A:**   = \_\_\_\_\_\_

-15

**Example B:**  = \_\_\_\_\_\_

-15

**Example C:**   = \_\_\_\_\_\_

15

**Example D:**  = \_\_\_\_\_\_

-60

**Example E:**   = \_\_\_\_\_\_

56

**Example F:**  = \_\_\_\_\_\_

8

**Example G:**   = \_\_\_\_\_\_

-16

**Example H:**  = \_\_\_\_\_\_

4

**Example I:**   = \_\_\_\_\_\_

-120

**Example J:**  = \_\_\_\_\_\_

14400

**Example K:**   = \_\_\_\_\_\_