Math 8 Muscardin

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

 **Chapter 1 – Numeracy**

Test Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

To do:

1.1 – Number Strategies

* Complete Notes ⃝

1.2 – GCF/LCM

* Complete Notes ⃝

1.3 – BEDMAS

* Complete Notes ⃝

1.4 – Integers

* Complete Notes ⃝

1.5 – Introduction to Fractions

* Complete Notes ⃝
* Quiz 1 ⃝

1.6 – Multiplying Fractions

* Complete Notes ⃝

1.7 – Dividing Fractions

* Complete Notes ⃝

1.8 – Mixed Numbers

* Complete Notes ⃝

1.9 – Adding and Subtracting Fractions

* Complete Notes ⃝

1.10 – Order of Operations with Fractions

* Complete Notes ⃝
* Quiz 2 ⃝

Assignments

* Chapter Assignment ⃝

**Write Unit Test ⃝**

Math 8 **Lesson 1.1 – Number Strategies** Muscardin

**Mental Math**

Rounding –

Expanding –

**Word Problems:**

1. Read the problem
2. Organize yourself
3. Strategize and Solve
4. Confirm your answer

Three friends earned $360 mowing lawns over two days. They decide to split the earnings evenly. How much does each person receive?

**Vocab:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Addition** | **Subtraction** | **Multiplication** | **Division** |
|  |  |  |  |

Math 8 **Lesson 1.2 – Greatest Common Factor/Lowest Common Denominator** Muscardin

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a number that is only divisible by 1 and itself.

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a number that has more than 2 factors.

**Factors** are all of the numbers that when multiplied result in a value. For example:

**Prime Factorization (Factor Trees):**

24

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ is the largest positive integer that divides evenly into all numbers with zero remainder. For example:

**Examples:**

1. Find the GCF of these numbers using prime factorization:

16, 24

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_ is the lowest quantity that is a multiple of two or more given quantities. For example:

**Examples:**

1. Find the LCM of these numbers using prime factorization:

16, 24

Math 8 **Lesson 1.3 - BEDMAS** Muscardin

A special order of operations is to be done when there are several operations needed to simplify an expression.

**B**

**E**

**D**

**M**

**A**

**S**

**Examples:**

1. $2+4×6-6$ 3. $4×\left(7+2\right)-3$
2. $\frac{12×2+8}{(5+8)×14}$ 4. $5-3(5-3)(5)$

Math 8 **Lesson 1.4 - Integers** Muscardin

An integer is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ whole number. For example:

Adding integers with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, you add the numbers and keep the same sign.

Adding integers with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, you subtract the numbers and keep the sign of the larger number. Subtraction is the same, rewrite the question as adding the opposite.

**Examples:**

1. $\left(-2\right)+(-5)$ 3. $2+(-6)$
2. $81+(-9)$ 4. $4-(-6)$

In multiplication or division, if the signs are different the answer always yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If the signs are the same the answer always yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Examples:**

1. $4×(-6)$ 3. $(-1)×(-2)$
2. $(-9)÷(-3)$ 4. $40/(-5)$

Math 8 **Lesson 1.5 – Introduction to Fractions** Muscardin

A fraction is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and can be visually illustrated with diagrams. For example:

A fraction is made up of two parts: the top \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the bottom \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. To compare fractions we need to have the denominators the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. We call these \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. For example:

There are 3 types of fractions:

* Proper Fractions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Improper Fractions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Mixed Fractions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

We can convert between improper fractions and mixed fractions.

**Improper to Mixed**

**Mixed to Improper**

**\*\* Always write fractions in lowest terms (DIVIDE)**

$$\frac{18}{45}$$

Math 8 **Lesson 1.6 – Multiplying Fractions** Muscardin

In order to find the product of fractions, find the product of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the product of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Final answers are reduced by dividing the top and the common by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples:

$$\frac{3}{4}×\frac{14}{15}$$

$$5×\frac{3}{8}$$

$$\frac{24}{30}×\frac{5}{12}$$

Math 8 **Lesson 1.7 – Dividing Fractions** Muscardin

In order to divide fractions, you must multiply the first fraction by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the second fraction.

The reciprocal of a number is a number that gives the product of \_\_\_\_\_\_.

Examples:

A common phrase to remember how to divide fractions is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples:

$$4÷\frac{1}{3}$$

$$\frac{3}{4}÷12$$

$$\frac{2}{3}÷\frac{8}{12}$$

Math 8 **Lesson 1.8 – Mixed Numbers** Muscardin

When finding the product or quotient of mixed fractions, rewrite them as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fractions first and then find the product.

Examples:

$$3\frac{2}{3}×1\frac{1}{2}$$

$$9\frac{1}{4}÷3\frac{3}{4}$$

Math 8 **Lesson 1.9 – Adding and Subtracting Fractions** Muscardin

In order to add or subtract fractions the denominators must be the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

When fractions are over the same denominator just add and/or subtract the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples:

$$\frac{3}{7}+\frac{2}{7}$$

$$\frac{7}{12}-\frac{5}{12}$$

When the denominators are not the same, re-write the fractions into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fractions with the same denominator first, then add or subtract the numerators.

Examples:

$$\frac{4}{5}+\frac{3}{10}$$

$$\frac{5}{6}-\frac{1}{3}$$

$$4\frac{1}{8}-2\frac{3}{7}$$

Math 8 **Lesson 1.10 – Order of Operations with Fractions** Muscardin

**BEDMAS**

1. $\frac{2}{3}+\frac{1}{8}×\frac{2}{9}$
2. $\frac{4}{7}×\left(\frac{1}{2}-\frac{2}{5}\right)÷\frac{3}{10}$