**Add, Subtract, Multiply and Divide Fractions REVIEW**

**Addition and Subtraction**

**Step 1** Line up the decimal points.

**Step 2** Put in zeros as placeholders, if necessary.

**Step 3** Add or subtract.

#  Example #1: Example #2:

Step 1- Line up the decimal points.

2.345 + 1.5 → 2.345 14 – 5.6 → 14.

 + 1.5\_\_ - 5.6

Step 2 - Put in zeros as placeholders.

 2.345 14.0

 + 1.500 - 5.6

Step 3 - Add or subtract.

 2.345 14.0

 + 1.500 - 5.6

 3.845 8.4

## Multiplication

**Step 1** Multiply the numbers ignoring the decimals.

**Step 2** Add the number of decimal digits in the original numbers.

**Step 3** Move the decimal the same number of places to the left in your answer.

**Example:** 3.2 x 0.41 =

Step 1 - Multiply ignoring the decimal points. 32

 X 41\_\_\_

 32

 128

 1312

Step 2 - Add the number of decimal digits in each of the original numbers: 3.2 has *one* decimal digit, and 0.41 has *two* decimal digits. Therefore, the answer will have a total of three decimal digits.

Step 3 - Move the decimal the same number of places to the left in your answer.

1312 will become 1.312

 ← three places

# Division

# Step 1 Shift the decimal to the right to make the divisor (outside number) a

# whole number.

**Step 2** Move the decimal of the dividend (inside number) the same number of

places to the right as the divisor. Add zeros, if needed.

**Step 3** Place the decimal point in your answer directly above the new decimal

point in the dividend. Divide.

**Example:**

# Step 1 - Shift the decimal to the right to make the divisor (.45) a whole number.

.45 becomes45

→ 2 places

Step 2 **-** Move the decimal of the dividend (36) the same number of places to the right. Add

 zeros if needed.

 45 becomes 45

Step 3 - Place the decimal point in your answer directly above the new decimal point in the dividend. Divide.

 45 45 360

 00

# Rounding

**Step 1**  Determine the place to which the number is to be rounded. Indicate it by

circling it or underlining it.

**Step 2** If the digit to the right of the number to be rounded is less than 5, replace it and all the digits to the right of it by zeros. If the digit to the right of the underlined number is 5 or higher, increase the underlined number by 1 and replace all numbers to the right by zeros. If the zeros are decimal digits, you may eliminate them.

#

**Place value chart**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ten thousands | Thousands | Hundreds | Tens | Ones | Decimal Point | Tenths | Hundredths | Thousandths | Ten Thousandths | Hundred Thousandths |
| 10,000 |  1,000 |  100 |  10 |  1 |  . |  .1 |  .01 |  .001  |  .0001 | .00001 |

**Example #1:** **Round 2.832 to the nearest hundredth.**

Step 1 – Determine the place to which the number is to be rounded.

 2.832

Step 2 – If the digit to the right of the number to be rounded is less than 5, replace it and all the digits to the right of it by zeros. If the digit to the right of the underlined number is 5 or higher, increase the underlined number by 1 and replace all numbers to the right by zeros. If the zeros are decimal digits, you may eliminate them.

2.832 = 2.830 = 2.83

**Example #2:** Round 43.5648 to the nearest thousandth.

43.5648 = 43.5650 = 43.565

**Example #3:** Round 5,897,000 to the nearest hundred thousand.

5,897,000 = 5,900,000