Math 7 **3.1 Fractions to Decimals**

NAME:
Date:

Non-integer numbers can be written as fraction or decimals.

**Fractions: Decimals:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Fraction** |  |  |  |  |  |
| **Decimal** |  |  |  |  |  |

 **Example**: Write each fraction as a decimal.

Strategy #1 – Change the fraction so that the denominator is 10, 100, 1000 etc.

Strategy #2 – Divide using long division.

**Example**: Write each decimal as a fraction. Reduce to lowest terms.

0.73 0.12

Extension:

Decimals such as 0.1 and 0.25, are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Decimals such as 0.333 333… or 0.454 545…; 0.811 111… are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Some digits in each repeating decimal repeat forever. We draw a bar over the digits that repeat.

**Example**:

Use a calculator to divide the following:

5 ÷ 9 38 ÷ 99 13 ÷ 999

What pattern do you see?

**Example**: Write the following repeating decimals as fractions.

0.2

0.875

0.03

Homework: p. 88 # 1,2,3,4 Bonus 5,6,8,9,10

Math 7 **3.2 Comparing and Ordering Fractions and Decimals**

NAME:
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*Question*: Three students are selling chocolate bars as a fund raiser for their school. The bars are packaged in cartons. Ardavan sold 2 $\frac{2}{3}$ cartons, Isha sold $\frac{5}{2}$ cartons and Daniel sold 2.25 cartons.
Who sold the most chocolate bars? How do you know?

Any fraction greater than 1 can be written as a mixed number.

Use a number line to order the following numbers: $\frac{2}{11}$ , 2 $\frac{3}{8}$ , 1$\frac{1}{16}$ , $\frac{14}{9}$ , $\frac{14}{15}$

Example:
a) Write the following numbers in order from least to greatest: $\frac{7}{8}$ , $\frac{9}{8}$ , $\frac{1}{4}$ , 0.75

b) Write a number between $\frac{9}{8}$ and 1$\frac{1}{4}$ .

Homework: p. 94 # 1, 3ac, 4ac, 5a, 6, 7, 8ac, 9a, 10, 11

Math 7 **3.3 Adding and Subtracting Decimals**

|  |  |
| --- | --- |
| **Day** | **Earnings (Millions of $)** |
| Friday | 70.95 |
| Saturday | 52.6 |
| Sunday | 34.53 |
| Monday | 12.3 |
| Tuesday | 15.9 |

NAME:
Date:

The Hunger Games: Mockingjay just set box office records for an opening 5 days in November. The earnings are shown in the table.
Estimate the total box office earnings.

Tips on Rounding:
- Find the place that you want to round
- Look at the digit to the right
- If it is 0 – 4 round \_\_\_\_\_\_\_\_\_\_
- If it is 5 – 9 round \_\_\_\_\_\_\_\_\_\_

When adding or subtracting decimal we will always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ first.

Determine the exact box office earnings.

How much more money did the movie make on Friday than it did on Saturday?

Estimate the following:
1) 13.7 + 9.15 2) 14.63 + 122.1 3) 48.3 - 12.59 4) 263.94 – 32.87

Math 7 **3.4 Multiplying Decimals**

NAME:
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Calculate the following:

12 x 22 38 x 11

Estimate the following:

1.9 x 2.3 4.25 x 9.11 12.2195 x 8.5903

We can solve decimal multiplication by **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and then **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Ex: 8.7 x 3.4 2) 2.28 x 15.6

To determine where to place the decimal point in our answer we can do the following:

* Look at our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Count the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ after the decimal place in the original number and then make sure that there are the same total number of digits

Math 7 **3.5 Dividing by Decimals**

NAME:
Date:

Ex. 52.1 ÷ 0.8

Use a calculator to find the following:

1) 52.1 ÷ 10 2) 52.1 ÷ 50 3) 52.1 ÷100

When we divide by a number greater than one the dividend gets \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Use a calculator to find the following:

1) 52.1 ÷ 0.1 2) 52.1 ÷ 0.05 3) 52.1 ÷ 0.01

When we divide by a number less than one the dividend gets \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Math 7 **3.6 Order of Operations**

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* When solving equations with multiple operations we go \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_ \_\_\_ \_\_\_\_\_\_\_\_\_\_\_
* Remember that we need to solve it in the correct order: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ex: Solve 12.376 ÷ (4.75 + 1.2) + 2.45 x 0.2 – 1.84

B
E
D
M
A
S

Math 7 **3.7 Relating Fractions, Decimals and Percents**

NAME:
Date:

Percentages are another way to write \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**En Francais:**

Hundred = \_\_\_\_\_\_\_\_\_\_

So **percent** literally translates to:

Ex: 12% 85%

Write the following as fractions and decimals:

a) 75% b) 8% c) 157%

Strategy for converting percentages:

* Write the number over \_\_\_\_\_\_\_\_\_\_\_ •

Write the following as percentages:

a) 0.18 b) 0.7 c) $\frac{7}{25}$ d) $\frac{21}{35}$

Strategy for converting to percentage

* Write as a fraction with a denominator of \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* If you are stuck \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the fraction first.

Math 7 **3.8 Solving Percentage Problems**

NAME:
Date:

Ex: A jacket costs $48 and is on sale for 30% off.

**Estimate**

a. How much would you save?
b. What is the final cost of the jacket?

Ex: A book costs $9 and there is an 8% sales tax. What is the final sale price?

**Estimate**