Topic 1 - Use Positive Rational Numbers

(Lesson 1-7 is NOT Included)

1-1 Fluently Add, Subtract and Multiply Decimals (Pages 9 to 14)

Focus Points

- When Adding or Subtracting Decimals : Align the decimal points

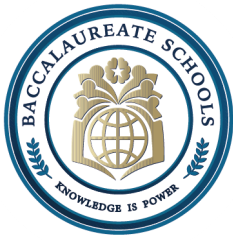- When Multiplying Decimals: Count the number of Decimal Places

Line up and find the sum. Add each place.

$$
\begin{array}{r}
\overset{1}{45.64} \\
+\ 58.00 \\
\hline
103.64
\end{array}
$$

Annex zeros so each place has a digit.

Multiply as you would with whole numbers. Then place the decimal point in the product. Annex zeros if needed. The number of decimal places in the product is the sum of the decimal places in the factors.

$$
\begin{array}{r}
3.12 \\
\times\ 2.4 \\
\hline
1248 \\
+6240 \\
\hline
7.488
\end{array}
$$

1-2 Fluently Divide Whole Numbers and Decimals (Pages 15 to 20)

Focus Point

- The Divisor Has to be be a Whole Number (Multiply by 10, 100, 1000 Depending on the number of decimal places

Complete the division by writing the remanider as a decimal.

$$
\begin{array}{r}
50.5 \\
28{\overline{\smash{\big)}\,1{,}414.0}} \\
-1\,40 \\
\hline
14 \\
-0 \\
\hline
14\,0 \\
-14\,0 \\
\hline
0
\end{array}
$$

Place a decimal point in the quotient and the dividend. Annex a zero to the dividend.

1-3 Multiply Fractions (Pages 21 to 26)
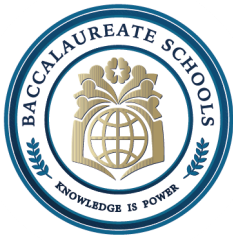
Focus Points

- Multiply Numerator by Numerator and Denominator by Denominator

- Write the answer in simplest form

Example 1

$$\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} \quad \text{or} \quad \frac{1}{2}$$

Example 2

$$2 \times \frac{3}{8} = \frac{2}{1} \times \frac{3}{8} \quad \text{Rename 2 as } \frac{2}{1}.$$

$$= \frac{6}{8} \quad \text{or} \quad \frac{3}{4}$$

1-4 Understand Division with Fractions (Pages 33 to 38)

Focus Points

- The Reciprocal of a fraction is its inverse (Flip the Fraction)

- A whole number becomes a fraction when you put one as its denominator

- Keep - Change - Flip

- Write the answer in simplest form

  Example

$$4 \div \frac{2}{3} = 4 \times \frac{3}{2}$$
$$= \frac{4}{1} \times \frac{3}{2}$$
$$= \frac{12}{2} \text{ or } 6$$

1-5 Divide Fractions by Fractions (Pages 39 to 44)

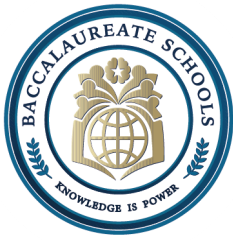**Focus Points**

- Keep - Change - Flip

- Write the answer in simplest form

Example

$$\frac{3}{4} \div \frac{1}{6} = \frac{3}{4} \times \frac{6}{1} \qquad \frac{6}{1} \text{ is the reciprocal of } \frac{1}{6}.$$
$$= \frac{18}{4} \text{ or } 4\frac{1}{2}$$
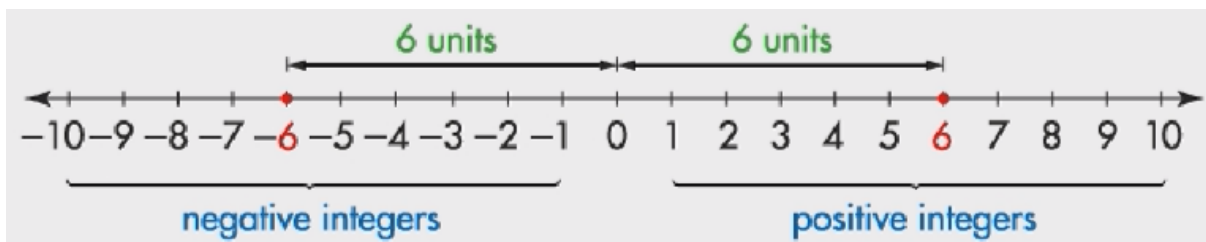
1-6 Divide Mixed Numbers (Page 45 to 50)

Focus Points

- Convert the mixed number into an Improper fraction

- Keep - Change - Flip

$$37\frac{1}{2} \div 6\frac{1}{4} = \frac{75}{2} \div \frac{25}{4}$$
$$= \frac{75}{2} \times \frac{4}{25}$$
$$= \frac{300}{50}$$
$$= 6$$

Topic 2:   Integers and Rational Numbers
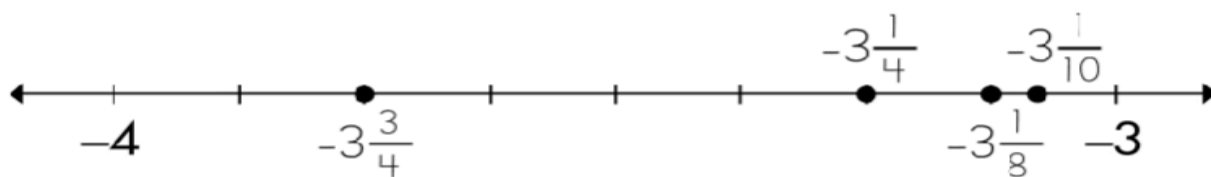
2-1 Understand Integers (Pages 69 - 74)

-Identify opposites of integers.

-Compare and order integers.

-Use integers to represent real-world quantities and explain the meaning

of 0 in each context.

2-2 Represent Rational Numbers on the Number Line (Pages 75 - 80)

    -Plot Rational Numbers on a number line

    -Compare and Order Rational Numbers

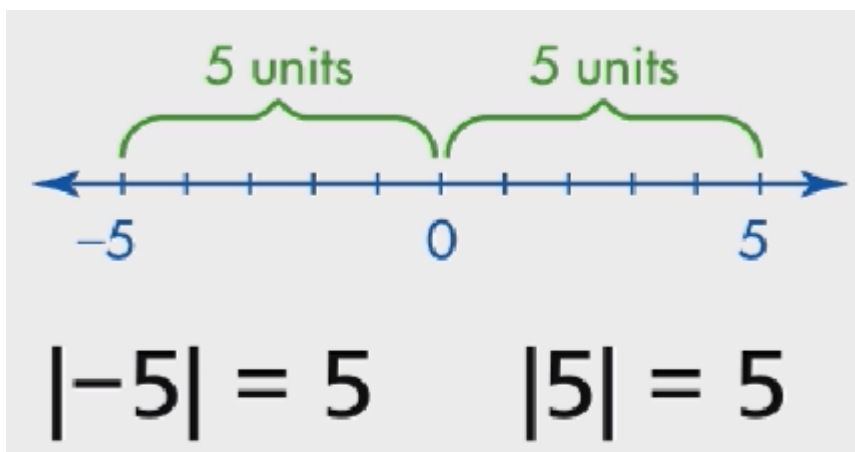   - Use Rational Numbers to represent real-world quantities

Example

$$-3\frac{3}{4}, \quad -3\frac{1}{4}, \quad -3\frac{1}{8}, \quad -3\frac{1}{10}$$
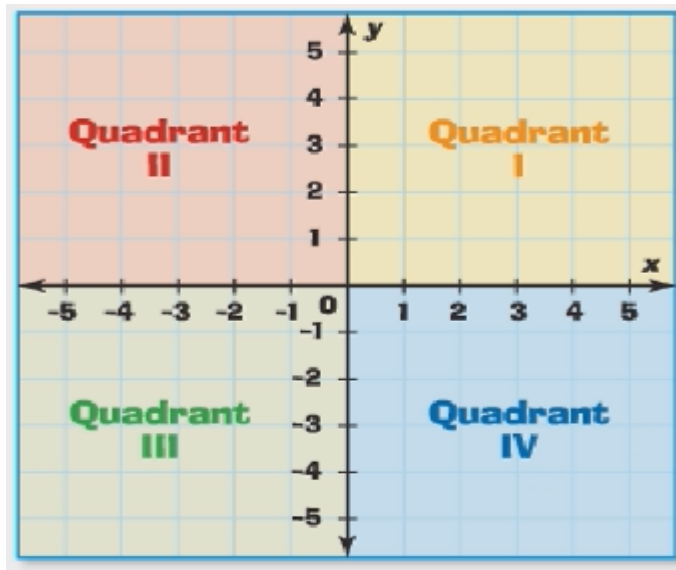
2-3 Absolute Values of Rational Numbers (Pages 81 - 86)

    -Use Absolute Value to represent a number's distance from zero
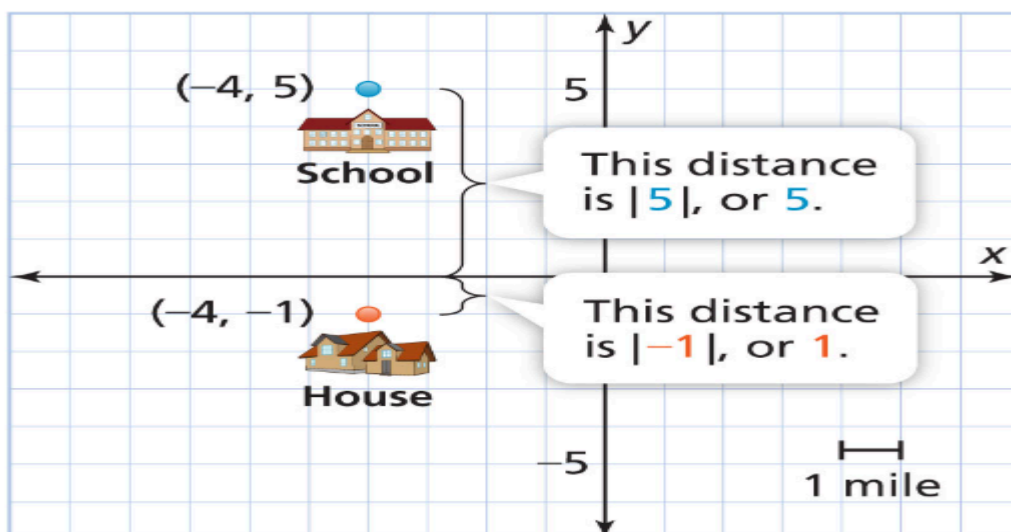
    -Explain Absolute Value in real-world situations

$$|-5| = 5 \qquad |5| = 5$$

2-4 Represent Rational Numbers on the coordinate plane (Pages 89 - 94)

-Plot and Label points on the coordinate plane

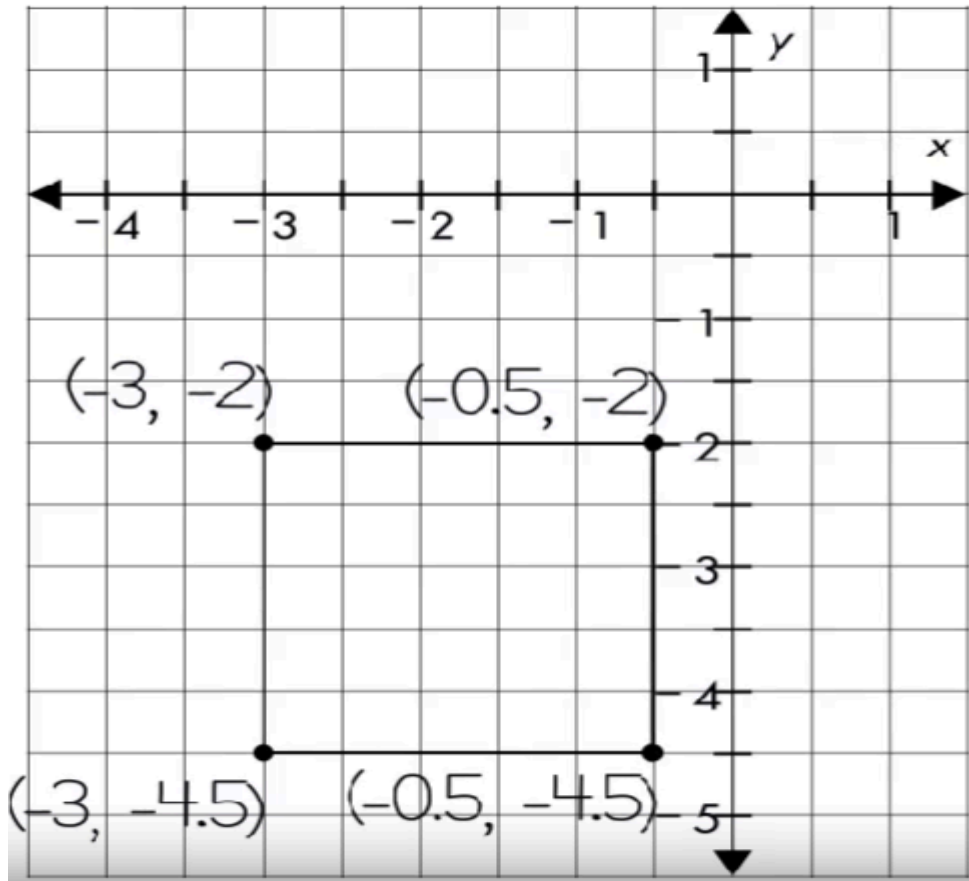- Locate reflections of points across the x-axis and the y-axis

2-5 Find Distances on the coordinate plane (Pages 99 - 104)

-Use Absolute Value to the find the distance between 2 points on the coordinate plane

2-6 Represent Polygons on the coordinate plane (Pages 105 - 110)

-Find the Lengths of polygons on the coordinate plane

-Find the Perimeter of polygons on the coordinate plane

❖ **Note**

A Revision worksheet will be provided before the exam that will include all types of questions to expect on the final exam.

❖ **Please Review**

- All the problems done in-class and assigned as homework.

- Worksheets / Quizzes

- Additional Practice on Savvas