LESSON 3-1

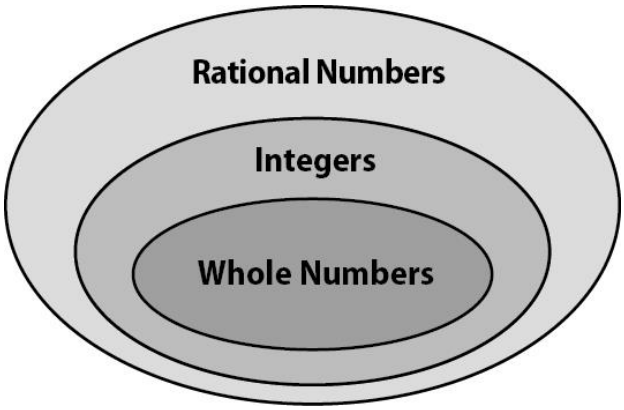
Classifying Rational Numbers

Practice and Problem Solving: A/B

Write each rational number in the form $\frac{a}{b}$, where *a* and *b* are integers.

1. 0.3 _____
2. $2\frac{7}{8}$ _____
3. –5 _____
4. 16 _____
5. $-1\frac{3}{4}$ _____
6. –4.5 _____
7. 3 _____
8. 0.11 _____

Place each number in the correct place on the Venn diagram.
Then list all the sets of numbers to which each number belongs.



9. –13 _____
10. $\frac{1}{6}$ _____
11. 0 _____
12. 0.99 _____
13. –6.7 _____
14. 34 _____
15. $-14\frac{1}{2}$ _____

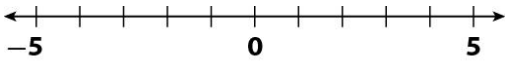
LESSON 3-2

Identifying Opposites and Absolute Value of Rational Numbers

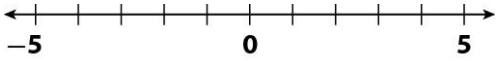
Practice and Problem Solving: A/B

Graph each number and its opposite on a number line.

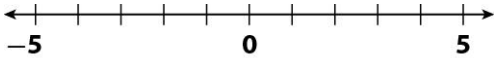
1. 3.5



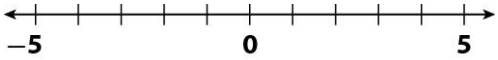
2. –2.5



3. $2\frac{1}{2}$



4. $-1\frac{1}{2}$



Name the opposite of each number.

5. 4.25 _____

6. $-5\frac{1}{4}$ _____

7. $\frac{1}{2}$ _____

Name the absolute value of each number.

8. $2\frac{1}{3}$ _____

9. –3.85 _____

10. –6.1 _____

The table shows elevations of checkpoints along a marathon route. Use the table to answer problems 11–13.

Checkpoint	**A**	**B**	**C**	**D**	**E**
Elevation (ft)	15.6	17.1	5.2	–6.5	–18.5

11. Write the opposite value of each checkpoint elevation.

_____

12. Which checkpoint is closest to sea level? _____

13. Which checkpoint is furthest from sea level? Explain.

_____

_____

Practice and Problem Solving: A/B

Write each fraction as a decimal. Round to the nearest hundredth if necessary.

1. $\frac{3}{8}$ ___ 2. $\frac{7}{5}$ ___ 3. $\frac{21}{7}$ ___ 4. $\frac{5}{3}$ ___

Write each decimal as a fraction or mixed number in simplest form.

5. 0.55 ___ 6. 10.6 ___ 7. –7.08 ___

Write the numbers in order from least to greatest.

8. 0.5, 0.05, $\frac{5}{8}$ _____ 9. 1.3, $1\frac{1}{3}$, 1.34 _____

10. 2.07, $2\frac{7}{10}$, 2.67, –2.67 _____

Solve.

11. Out of 45 times at bat, Raul got 19 hits. Find Raul's batting average as a decimal rounded to the nearest thousandth. _____

12. Karen's batting average was 0.444. She was at bat 45 times. How many hits did she get? _____

13. To have batting averages over 0.500, how may hits in 45 times at bat would Raul and Karen need? _____

14. A car travels at 65 miles per hour. Going through construction, it travels at $\frac{3}{5}$ this speed. Write this fraction as a decimal and find the speed. _____

15. A city's sales tax is 0.07. Write this decimal as a fraction and tell how many cents of tax are on each dollar. _____

16. A ream of paper contains 500 sheets of paper. Norm has 373 sheets of paper left from a ream. Express the portion of a ream Norm has as a fraction and as a decimal. _____

MODULE 3

Rational Numbers

Challenge

1. A food processing plant packs oranges into boxes. The weight of the oranges to be packed and the number of boxes available on each day of a week are shown in the table below.

Day	Weight of Oranges (lb)	Number of Boxes
Monday	113	45
Tuesday	116	43
Wednesday	144	50
Thursday	129	40
Friday	109	35

Each day, the oranges are packed so that every box weighs the same. The food processing plant will not ship a box if the weight of the box is greater than 3 pounds.

a. On which of the days in the five-day period shown will the boxes of oranges be too heavy to ship?

_____

b. Of the boxes that ship, the heaviest boxes sell for the highest price. On which day will the boxes packed sell for the highest price?

_____

2. The inequality below is incorrect. The five numbers are not in the correct order.

$$2 \le -\frac{1}{8} \le -10 \le -0.125 \le -\frac{15}{2}$$

You can correct the inequality by swapping the numbers. Each time you swap a pair of numbers, it counts as one “move.”

What is the minimum number of “moves” that are required to make the above inequality correct?

_____

What is the correct inequality?

_____