Module 5   Decimal Operations, Exponents, and Powers
Lesson 1   Rounding and Comparing Decimals

Lesson Notes 5.1

Lesson Objectives

- Round and compare decimals to a given place value (whole number, tenths, hundredths, and thousandths).

Subtopic 1   Rounding Decimals to a Given Place Value

- Rounding a number is finding the value of a number based on a given **place value**.

To round a decimal:

- Find the digit in the **rounding** place.
- Look at the number to its **right**.
- If the digit is **five** or greater, increase rounding number by **one**.
- If the digit to the right is **less** than five, the rounding number **stays the same**.
- Replace digits to the right with **zeros**.

1 Round 4.81 to the nearest tenth.
     4.8

2 Round 0.428 to the nearest hundredth.
     0.43

3 Round 38.573 to the nearest whole number.
     39

Subtopic 2   Comparing Positive Decimals

- The symbol for "less than" is <u>< </u>.
- The symbol for "greater than" is<u> > </u>.
- The symbol for "is equal to" is <u> = </u>.
- On a number line, the number on the left is always **less** than the number on the right.

To compare two positive decimals using place value:

- Compare the numbers in each place value, starting from the **left**.
- Compare until the values are **different**.
- The greater value is the **greater number**.
- A positive number is always **greater** than a negative number.

Use <, >, or = to compare the decimals.

4 4.25 and 4.25

4.25 = 4.25

5 0.054 and 0.09

0.054 < 0.09

Subtopic 3   **Comparing Negative Decimals**

- The greater the **absolute value** of a negative number, the **smaller** the number.

Use <, >, or = to compare the decimals.

6 -67.2 and -76.3

|-67.2| = 67.2
|-76.3| = 76.3
|-67.2| < |-76.3|

-67.2 > -76.3

7 -8.001 and -8.1

|-8.001| = 8.001
|-8.100| = 8.100
|-8.001| < |-8.100|

-8.001 > -8.1