

## ROUNDING RULES

To round a **whole number** to a given place value, use the following rules.

- 1) If the digit to the right of the given place value is less than 5, that digit and all digits to the right are replaced by zeros.
- 2) If the digit to the right of the given place value is 5 or greater, increase the digit in the given place value by 1 and replace all other digits to the right with zeros.

**Example 1:** Round 13,384 to the nearest hundred.

Since the digit to the right of the hundreds place, 8, is greater than 5, increase the digit in the hundreds place by 1 and replace all other digits to the right with zeros. (Note: the symbol " $\approx$ " means "approximately.")

$$\begin{array}{r} \text{Given place value} \downarrow \\ 13,384 \approx 13,400 \\ \uparrow 8 > 5 \end{array}$$

Rounded to the nearest hundred:  $13,384 \approx 13,400$

**Example 2:** Round 364,537 to the nearest ten thousand.

Since the digit to the right of the ten thousands place, 4, is less than 5, replace the 4 and all digits to the right of 4 with zeros.

$$\begin{array}{r} \text{Given place value} \downarrow \\ 364,527 \\ \uparrow 4 < 5 \end{array}$$

Rounded to the nearest ten thousand:  $364,527 \approx 360,000$

Rounding **decimals** is the same as rounding whole numbers except that the digits to the right of the given place value are dropped and not replaced with zeros:

- 1) If the digit to the right of the given place value is less than 5, that digit and all digits to the right are dropped.
- 2) If the digit to the right of the given place value is 5 or greater, increase the given place value by 1 and drop all digits to its right.

**Example 3:** Round 36.372541 to the nearest thousandth.

Since the digit to the right of the thousandths place, 5, equals 5, increase the digit in the thousandths place by 1 and drop all digits to its right.

$$\begin{array}{r} \text{Given place value} \downarrow \\ 36.372541 \approx 36.373 \\ \uparrow 5 = 5 \end{array}$$

Rounded to the nearest thousandth:  $36.372541 \approx 36.373$