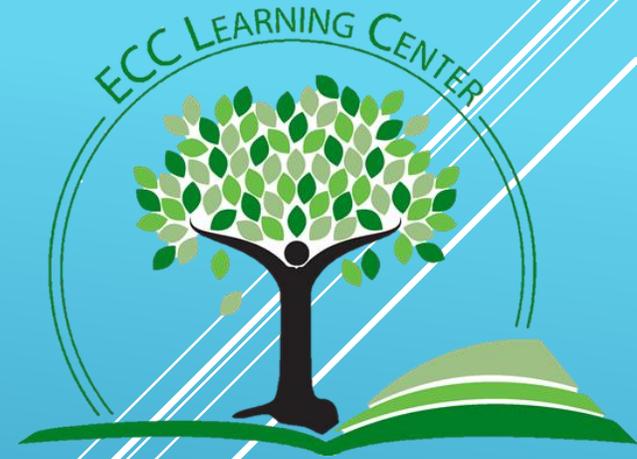


ROUNDING



This presentation will cover the rules for rounding measurements and calculations.

The rules for rounding can vary. Here are the two most commonly-used sets of rounding rules:

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ROUNDING

When performing measurements or calculations, you will often have to round the results.

“Easy” Method 1: If the number to the right of the number to be rounded is 4 or below, drop those numbers and keep the last digit the same. *(1.44 becomes 1.4)* If the number to the right of the number to rounded is 5 or above, round the last digit up, dropping the numbers after it. *(1.36 becomes 1.4), *(1.45 becomes 1.5)*

“Even/Odd” Method 2: If the number being dropped is 4, 3, 2 or 1 drop those numbers and keep the last digit the same. *(1.44 becomes 1.4)* If the number to the right of the number to be rounded is 6, 7, 8 or 9 round the last digit up one unit. *(1.36 becomes 1.4)*

If the number to be dropped is 5 and the number to the left is EVEN, keep the last digit the same. **(1.45 becomes 1.4)* If the number to the left of the 5 is ODD, round the last digit up one unit. *(1.35 becomes 1.4)*

EXAMPLES OF ROUNDING “EASY” METHOD 1: IF THE NUMBER TO THE RIGHT OF THE NUMBER TO BE ROUNDED IS 4 OR BELOW, DROP THOSE NUMBERS AND KEEP THE LAST DIGIT THE SAME. IF THE NUMBER TO THE RIGHT OF THE NUMBER TO ROUNDED IS 5 OR ABOVE, ROUND THE LAST DIGIT UP, DROPPING THE NUMBERS AFTER IT.

Round each of the following measurements to 3 significant figures.

- | | | |
|--------------------------|-----------|-----------------------|
| ▶ 3.586 cm | rounds to | 3.59 cm |
| ▶ 17.51 g | rounds to | 17.5 g |
| ▶ 0.01733 mL | rounds to | 0.0173 mL |
| ▶ 18.725 s | rounds to | 18.7 s |
| ▶ 100.5 mg | rounds to | 101 mg |
| ▶ 3.192×10^4 mg | rounds to | 3.19×10^4 mg |

EXAMPLES OF ROUNDING EVEN/ODD METHOD 2: IF THE NUMBER TO THE LEFT OF THE 5 IS EVEN, DROP THOSE NUMBERS AND KEEP THE LAST DIGIT THE SAME. IF THE NUMBER TO THE LEFT OF THE 5 IS ODD, ROUND THE LAST DIGIT UP, DROPPING THE NUMBERS AFTER IT.)

Round each of the following measurements to 3 significant figures.

- | | | |
|----------------------------|-----------|-------------------------|
| ▶ 3.152 mg | rounds to | 3.15 mg |
| ▶ 0.18253 m | rounds to | 0.182 m |
| ▶ 1.225 L | rounds to | 1.22 L |
| ▶ 1.34599999999 km | rounds to | 1.34 km |
| ▶ 0.001295 g | rounds to | 0.00130 g |
| ▶ 1.485×10^{-5} s | rounds to | 1.48×10^{-5} s |