G5-M1-Lesson 4

In the first 2 problems, I am converting a *larger* unit to a *smaller* unit. Therefore, I need to multiply to find the equivalent length.

1. Convert and write an equation with an exponent.

1 meter is equal to 100 centimeters.

a. 4 meters to centimeters ___4___ m = ___400___ cm $4 \times 10^2 = 400$

1 meter is equal to 1,000 millimeters.

b. 2.8 meters to millimeters ___2.8___ m = ___2,800___ mm $2.8 \times 10^3 = 2{,}800$

In these 2 problems, I am converting a *smaller* unit to a *larger* unit. Therefore, I need to divide to find the equivalent length.

2. Convert using an equation with an exponent.

There are 100 centimeters in 1 meter.

a. 87 centimeters to meters ___87___ cm = ___0.87___ m $87 \div 10^2 = 0.87$

There are 1,000 millimeters in 1 meter.

b. 9 millimeters to meters ___9___ mm = ___0.009___ m $9 \div 10^3 = 0.009$

3. The height of a cellphone is 13 cm. Express this measurement in meters. Explain your thinking. Include an equation with an exponent in your explanation.

$13 \text{ cm} = 0.13 \text{ m}$

In order to rename smaller units as larger units, I'll need to divide.

Since 1 meter is equal to 100 centimeters, I divided the number of centimeters by 100.

$13 \div 10^2 = 0.13$

I need to include an equation with an exponent, so I'll express 100 as 10^2.