

Name _____

Date _____

1. Convert and write an equation with an exponent. Use your meter strip when it helps you.

a. 2 meters to centimeters $2\text{m} = 200\text{ cm}$ $2 \times 10^2 = 200$

b. 108 centimeters to meters $108\text{ cm} = \underline{\hspace{2cm}}\text{ m}$ _____

c. 2.49 meters to centimeters $\underline{\hspace{2cm}}\text{ m} = \underline{\hspace{2cm}}\text{ cm}$ _____

d. 50 centimeters to meters $\underline{\hspace{2cm}}\text{ cm} = \underline{\hspace{2cm}}\text{ m}$ _____

e. 6.3 meters to centimeters $\underline{\hspace{2cm}}\text{ m} = \underline{\hspace{2cm}}\text{ cm}$ _____

f. 7 centimeters to meters $\underline{\hspace{2cm}}\text{ cm} = \underline{\hspace{2cm}}\text{ m}$ _____

g. In the space below, list the letters of the problems where smaller units are converted to larger units.

2. Convert using an equation with an exponent. Use your meter strip when it helps you.

a. 4 meters to millimeters $\underline{\hspace{2cm}}\text{ m} = \underline{\hspace{2cm}}\text{ mm}$ _____

b. 1.7 meters to millimeters $\underline{\hspace{2cm}}\text{ m} = \underline{\hspace{2cm}}\text{ mm}$ _____

c. 1,050 millimeters to meters $\underline{\hspace{2cm}}\text{ mm} = \underline{\hspace{2cm}}\text{ m}$ _____

d. 65 millimeters to meters $\underline{\hspace{2cm}}\text{ mm} = \underline{\hspace{2cm}}\text{ m}$ _____

e. 4.92 meters to millimeters $\underline{\hspace{2cm}}\text{ m} = \underline{\hspace{2cm}}\text{ mm}$ _____

f. 3 millimeters to meters $\underline{\hspace{2cm}}\text{ mm} = \underline{\hspace{2cm}}\text{ m}$ _____

g. In the space below, list the letters of the problems where larger units are converted to smaller units.

3. Read each aloud as you write the equivalent measures. Write an equation with an exponent you might use to convert.

a. 2.638 m = _____ mm $2.638 \times 10^3 = 2,638$

b. 7 cm = _____ m _____

c. 39 mm = _____ m _____

d. 0.08 m = _____ mm _____

e. 0.005 m = _____ cm _____

4. Yi Ting's height is 1.49 m. Express this measurement in millimeters. Explain your thinking. Include an equation with an exponent in your explanation.

5. A ladybug's length measures 2 cm. Express this measurement in meters. Explain your thinking. Include an equation with an exponent in your explanation.

6. The length of a sticky note measures 77 millimeters. Express this length in meters. Explain your thinking. Include an equation with an exponent in your explanation.

Answer Key

1.
 - a. Answer provided.
 - b. 108; 1.08; $108 \div 10^2$
 - c. 2.49; 249; 2.49×10^2
 - d. 50; 0.50; $50 \div 10^2$
 - e. 6.3; 630; 6.3×10^2
 - f. 7; 0.07; $7 \div 10^2$
 - g. b, d, f
2.
 - a. 4; 4000; 4×10^3
 - b. 1.7; 1700; 1.7×10^3
 - c. 1050; 1.050; $1050 \div 10^3$
 - d. 65; 0.065; $65 \div 10^3$
 - e. 4.92; 4920; 4.92×10^3
 - f. 3; .003; $3 \div 10^3$
 - g. a, b, c
3.
 - a. 2638; answer provided.
 - b. 0.07; $7 \div 10^2$
 - c. 0.039; $39 \div 10^3$
 - d. 80; 0.08×10^3
 - e. 0.5; 0.005×10^2
4. 1.49 m = 1490 mm; $1.49 \div 10^3$
5. 2 cm = 0.02 m; $2 \div 10^2$
6. 77 mm = 0.077 m; $77 \div 10^3$