Name_____ Date_____ Period_____

LESSON 3-6 · SESSION 2 · PRACTICE · FORM A

Metric Unit Conversions

Learning target – I can convert between metric units by multiplying or dividing by powers of ten. · 6.RP.A.3d

REMEMBER

- Metric units use **powers of 10**: 1 km = 1,000 m · 1 m = 100 cm · 1 cm = 10 mm · 1 kg = 1,000 g · 1 L = 1,000 mL.
- Big unit to small unit: **multiply** (3 kg = 3,000 g). Small to big: **divide** (4,000 g = 4 kg).
- Make the units **match** before you divide or compare.

WORKED EXAMPLE

A bag has 2.4 kg of flour. How many 300 g portions can you make?

Step 1 Match units: 2.4 × 1,000 = 2,400 g.

Step 2 Divide: 2,400 ÷ 300 = 8.

Step 3 Check: 8 × 300 = 2,400 g.

Answer **8 portions**

WORDS **metric units** *(unidades métricas)* · **powers of 10** *(potencias de 10)* · **convert** *(convertir)*

PRACTICE

show your work · label units

1. Convert each measure.

a. 7 km = ___ m

b. 1,500 mL = ___ L

c. 3 kg = ___ g

d. 250 cm = ___ m

e. 2,450 m = ___ km

f. 2.5 mL = ___ L

2. **Water Cooler.** A cooler has 4 L of water. Complete the table. How many 500 mL bottles can it fill?

Hint *Divide the total milliliters by 500.*

Liters	1	2	3	4
Milliliters	1,000	2,000	3,000	

Answer_____ bottles

3. **5K Run.** A charity race is 5 km long. (1 km = 1,000 m)

a. Meters: _____ m

b. A runner has gone 3,200 m. Meters left: _____ m

Show your work.

4. **Lab Mass.** A student measures 350 g of salt. (1 g = 1,000 mg, 1 kg = 1,000 g)

a. Milligrams: _____ mg

b. Kilograms: _____ kg

Show your work.

5. Lab Ribbon. A teacher cuts a 2.4-meter ribbon into 30 cm pieces. (1 m = 100 cm)

Hint *Change meters to centimeters before you divide.*

a. Ribbon length in centimeters: _____ cm

b. Number of 30 cm pieces: _____ pieces

Show your work.

6. Backpack Limit. A backpack weighs 4,800 grams. The safety limit is 5 kg. Is the backpack under the limit? (1,000 g = 1 kg)

Hint *Change grams to kilograms: divide by 1,000.*

Show your work.

Yes or no_____

7. Recycling Bin. A full recycling bin has a mass of 12.75 kilograms. What is its mass in grams? (1 kg = 1,000 g)

Hint *Kilograms to grams is big to small: multiply.*

Show your work.

Answer_____ g

8. Class Relay. Each of 8 runners covers 450 meters in a relay.

a. Total distance in meters: _____ m

b. Total distance in kilometers: _____ km

c. Which unit would you use to report the total? Why? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Daniel's Work. Daniel converted 3 meters to centimeters by dividing: 3 ÷ 100 = 0.03 cm. Explain his mistake and find the correct length.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. 4 kilometers equals how many meters?

A 4,000 **B** 400 **C** 40 **D** 0.004

11. Metric conversions all use powers of –

A 2 **B** 5 **C** 12 **D** 10

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

3.6 L	12,750 A	0.35 M	245 Z	1.5 D	1,275 Q	1,800 I	8 C	35 X	2.45 E

#1b	#1e	#2	#3b	#4b	#7	#8b

CHECK YOURSELF ☐ I can do this on my own ☐ I need a little help ☐ I have a question about #___