Name_____ Date_____ Period_____

**LESSON 3-7 · SESSION 1 · PRACTICE · FORM A**

# Customary vs. Metric Conversions

Learning target – I can convert a measurement between the customary and metric systems using a given rate. · 6.RP.A.3d

**REMEMBER**

- Use the fact the problem gives. **≈** means "about equal to," so answers are **estimates**.
- With 1 kg ≈ 2.2 lb: kg to lb, **multiply** (10 × 2.2 = 22 lb). Lb to kg, **divide**.
- Before you compare two amounts, put both in the **same unit**.

**WORKED EXAMPLE**

A bag weighs 44 pounds. About how many kilograms? (1 kg ≈ 2.2 lb)

**Step 1** A kilogram is heavier, so the number gets smaller: divide.

**Step 2** 44 ÷ 2.2 = 20.

**Step 3** Check: 20 × 2.2 = 44.

**Answer** **44 lb ≈ 20 kg**

**WORDS** **conversion factor** *(factor de conversión)* · **approximately (≈)** *(aproximadamente)* · **reasonableness** *(razonabilidad)*

## PRACTICE

*show your work · label units*

**1.** Convert. (1 kg ≈ 2.2 lb, 1 m ≈ 3.28 ft, 1 in = 2.54 cm)

**a.** 10 kg ≈ ____ lb

**b.** 44 lb ≈ ____ kg

**c.** 5 m ≈ ____ ft

**d.** 4 in = ____ cm

**2.** **Speed Sign.** A highway sign in Canada reads 100 km per hour. (1 mi ≈ 1.6 km)

**Hint** *A mile is longer than a kilometer, so divide.*

**a.** About how many miles per hour is that? _____ mph

**b.** Should your answer be greater or less than 100? Why? _____

*Show your work.*

**3.** **Soccer Field.** A soccer field is 70 m wide. A football field is 160 ft wide. (1 m ≈ 3.28 ft)

**a.** Soccer width in feet: _____ ft

**b.** Which field is wider? _____

*Show your work.*

**4.** **Suitcase.** The bag limit is 50 lb. A suitcase weighs 20 kg. (1 kg ≈ 2.2 lb)

**a.** Weight in pounds: _____ lb

**b.** Under the limit? By how much? _____

*Show your work.*

**5. Road Trip.** A drive to Montreal is 150 miles. About how many kilometers is that? (1 mi ≈ 1.6 km)

**Hint** *Kilometers are shorter, so the number gets bigger: multiply.*

*Show your work.*

**Answer** _____ km

**6. Water Bottle.** A bottle holds 16.9 fluid ounces. About how many milliliters is that, to the nearest whole mL? (1 fl oz ≈ 29.6 mL)

*Show your work.*

**Answer** _____ mL

**7. Backpack Check.** A backpack weighs 7 kg. The nurse says it should stay under 16 pounds. Find its weight in pounds. Is it under the limit? (1 kg ≈ 2.2 lb)

**Hint** *Change kilograms to pounds, then compare with 16.*

*Show your work.*

**Answer** _____ lb

**8. Which Is Longer?** A rope is 4 m long. A cable is 12 ft long. (1 m ≈ 3.28 ft)

**Hint** *Put both lengths in feet before you compare.*

**a.** Rope length in feet: _____ ft

**b.** Which is longer, and by about how much? _____

*Show your work.*

## FIND THE ERROR

*explain the mistake, then fix it*

**9. Kelly's Work.** Kelly converted 50 miles to kilometers by dividing: 50 ÷ 1.6 = 31.25 km. Explain why 31 km is impossible for 50 miles. Then find the correct distance. (1 mi ≈ 1.6 km)

## TEST PRACTICE

*choose the best answer*

**10.** 2 meters is about how many feet? (1 m ≈ 3.28 ft)

**A** 1.64 **B** 6.56 **C** 5.28 **D** 32.8

**11.** 4.4 pounds is about how many kilograms? (1 kg ≈ 2.2 lb)

**A** 9.68 **B** 6.6 **C** 2.2 **D** 2

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

| 44<br>R | 9.09<br>X | 15.4<br>C | 16.4<br>M | 93.75<br>Q | 229.6<br>T | 62.5<br>E | 240<br>I | 160<br>Z |
|---|---|---|---|---|---|---|---|---|

| #1c | #2a | #3a | #4a | #5 | #7 |
|---|---|---|---|---|---|
| | | | | | |

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