Lesson 3-6 · Session 1

Customary Unit Conversions

Name _____ Date _____ Period _____

Maryland Standard 6.AT.3c · Learning target — I can convert between customary units by multiplying or dividing by the conversion rate.

Show a model, calculation, or explanation. Answer every part and label units when needed.

Exercises 1–12 earn 1 point for a correct response and 1 for supporting work. Spiral Review and Test Practice earn 1 point each.

Learn from a model

REMEMBER

- Common customary conversions: 12 inches = 1 foot, 3 feet = 1 yard, 16 ounces = 1 pound, 2 cups = 1 pint.
- Multiply by the conversion ratio to convert; keep the units you want on top.
- Watch out — multiplying when you should divide makes the answer far too large.
- Check it — more of a smaller unit, fewer of a larger unit. Does your answer fit?

WORKED EXAMPLE

Converting Between Customary Units A bookshelf is 6 feet tall. How many inches is that? (1 foot = 12 inches)

Step 1 Write the conversion factor. 1 ft = 12 in

Step 2 Decide the direction. Feet inches is LARGER to smaller, so multiply.

Step 3 Multiply. 6 × 12 = 72

Step 4 Check that it makes sense — inches are small, so the number got bigger.

Answer 6 feet = 72 inches.

Practice

1. Convert 5 feet to inches. _____

Answer _____

SHOW YOUR THINKING

2. Convert 48 ounces to pounds. _____

Answer _____

SHOW YOUR THINKING

3. A recipe calls for 6 cups of water. How many pints is that? _____

Answer _____

SHOW YOUR THINKING

4. Convert each measure. (1 yd = 3 ft; 1 ft = 12 in; 1 lb = 16 oz; 1 gal = 4 qt; 1 pt = 2 cups)

a. 4 yd = _____ ft
b. 96 in = _____ ft
c. 7 lb = _____ oz
d. 5 gal = _____ qt
e. 8 pt = _____ cups

Answer _____

SHOW YOUR THINKING

5. Rope Ladder. A rope ladder is 9 yards long. How many inches long is it? (1 yd = 3 ft; 1 ft = 12 in)

Answer _____

SHOW YOUR THINKING

6. A watermelon weighs 144 ounces. How many pounds is that? (16 oz = 1 lb)

Answer _____

SHOW YOUR THINKING

7. Soup Pot. A soup pot holds 7 gallons. How many cups is that? (1 gal = 4 qt; 1 qt = 4 cups)

Answer _____

SHOW YOUR THINKING

8. Ms. Ruiz asks for 40 inches of ribbon. Elijah says that is more than 4 feet because 40 is greater than 4. Explain his mistake, then give the correct length in feet and inches.

Answer _____

EXPLAIN WITH MATHEMATICAL EVIDENCE

9. Convert 9 feet to inches. (1 ft = 12 in.)

Answer _____ inches

SHOW YOUR THINKING

10. Convert 96 ounces to pounds. (1 lb = 16 oz)

Answer _____ pounds

SHOW YOUR THINKING

11. Two Steps. A track lane is 4 yards wide. How many inches is that? (1 yd = 3 ft, 1 ft = 12 in.)

Answer _____ inches

SHOW YOUR THINKING

12. Find the Mistake. Asked to convert 36 inches to feet, Pedro multiplied by 12 to get 432. Explain the mistake.

Answer _____ the mistake and the answer

EXPLAIN WITH MATHEMATICAL EVIDENCE

Spiral review

13. From Lesson 3-5 Session 1. Which is stronger: 3 : 10 or 4 : 14?

Answer _____

SHOW YOUR THINKING

14. From Lesson 3-3 Session 1. Scale 9 : 4 by 3.

Answer _____

SHOW YOUR THINKING

15. From Lesson 2-8 Session 1. Find the mean of 50, 54, 58.

Answer _____

SHOW YOUR THINKING

Test practice

16. 7 feet equals how many inches?

□ A. 70	□ B. 19
□ C. 84	□ D. 0.58

17. 8 quarts equals how many gallons?

□ A. 4	□ B. 32
□ C. 16	□ D. 2

18. Going from a smaller unit to a bigger unit, you —

□ A. divide	□ B. multiply
□ C. add	□ D. square

Check and revise

CHECK YOUR MATHEMATICS

Use the supplied factors. Keep exact and approximate relationships distinct.

Every part answered / Work shown / Units labeled when needed

HOW DID IT GO?

I can do this:
Independently / With a hint / With help

Question to revisit: _____

One correction or question I want to discuss: _____

Check that corresponding quantities stay in order. Label units and explain what your answer means.