Name_____ Date_____ Period_____

**LESSON 6-1 · SESSION 2 · PRACTICE · FORM A**

# Dividing a Fraction by a Whole Number

Learning target – I can divide a fraction by a whole number and explain the result. · 6.NS.A.1

**REMEMBER**

- Dividing by a whole number **shares** the fraction into equal parts.
- **Multiply by the reciprocal** of the whole number: 2/3 ÷ 4 = 2/3 × 1/4 = 2/12 = 1/6.
- Each share is **less** than the fraction. Check: share × number of shares = the fraction.

**WORKED EXAMPLE**

A painter pours 2/3 liter of paint evenly into 4 trays. How much paint is in each tray?

**Step 1** Write the division: 2/3 ÷ 4.

**Step 2** Multiply by the reciprocal: 2/3 × 1/4 = 2/12.

**Step 3** Simplify: 2/12 = 1/6. Check: 1/6 × 4 = 4/6 = 2/3.

**Answer** **1/6 liter in each tray**

**WORDS** **reciprocal** *(recíproco)* · **multiplicative inverse** *(inverso multiplicativo)* · **divisor** *(divisor)*

## PRACTICE

*show your work · label units*

**1.** Divide. Write each quotient in simplest form.

**a.** 1/3 ÷ 2 = _____ **b.** 3/5 ÷ 3 = _____ **c.** 4/5 ÷ 2 = _____

**d.** 7/10 ÷ 7 = _____ **e.** 8/9 ÷ 2 = _____ **f.** 5/6 ÷ 10 = _____

**2.** **Hiking Supplies.** A club splits 3/4 pound of trail mix evenly among 4 hikers, as the tape shows.




**a.** How much trail mix does each hiker get? _____ lb

**b.** They pour 2/3 gallon of water evenly into 10 bottles. Amount per bottle? _____ gal

**3.** **Clay Balls.** A sculptor has 3/5 kilogram of clay. She divides it equally into 10 balls. What is the mass of each ball?

**Hint** *Multiply 3/5 by 1/10.*

*Show your work.*

**Answer**_____ kg

**4.** **Glue Bottles.** A jar holds 6/7 liter of glue. It is poured evenly into 3 bottles. How much glue is in each bottle?

**Hint** *Multiply by 1/3, then simplify.*

*Show your work.*

**Answer**_____ L

5. **String Pieces.** A 3/4-yard string is cut into 4 equal pieces. Priya says each piece is 3 yards long. Justify or correct her answer.

**Hint** *Is one piece longer or shorter than the whole string?*

*Show your work.*

**Answer**_____ yard

6. **Lemonade.** Sara has 7/12 liter of lemonade. She pours out 3/12 liter, then shares the rest equally among 4 friends.

**Hint** *Subtract first, then share the rest.*

**a.** How much is left? _____ L

**b.** How much does each friend get? _____ L

*Show your work.*

7. **Baking Day.** A baker has 7/8 kilogram of dough to split evenly among trays.

**a.** How much dough goes on each tray if there are 7 trays? _____ kg

**b.** How much if there are 14 trays? _____ kg

**c.** How did doubling the number of trays change each share? _____

8. **Fabric Strip.** A strip of fabric is 8/9 meter long. It is cut into 4 equal pieces. Find the length of one piece. Then check by multiplying.

**Hint** *Check: your answer × 4 should equal 8/9.*

*Show your work.*

**Answer**_____ m

## FIND THE ERROR

*explain the mistake, then fix it*

9. **Caleb's Work.** Caleb solved 3/4 ÷ 10. He kept the divisor right side up and wrote 3/4 × 10/1 = 30/4. Explain his mistake. Then find the correct quotient.

## TEST PRACTICE

*choose the best answer*

**10.** Find 1/2 ÷ 4.

**A** 2 **B** 1/8 **C** 8 **D** 1/2

**11.** The reciprocal of 8 is –

**A** 1/8 **B** 8 **C** −8 **D** 0.8

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

| 6<br>X | 3<br>Z | 2/7<br>H | 2/9<br>G | 1/8<br>I | 1/16<br>N | 1/12<br>R | 3/50<br>S | 18/7<br>Q | 3/16<br>A |
|---|---|---|---|---|---|---|---|---|---|

| #3 | #4 | #5 | #6b | #7a | #7b | #8 |
|---|---|---|---|---|---|---|
| | | | | | | |

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