MSTAR PRACTICE WORKSHEET

# Lesson 6-2: Division Expressions with Fractions and Mixed Numbers

Grade 6 Mathematics · Standard 6.NOS.1

Name: _____ Date: _____

*These are MSTAR-style questions written for this curriculum to rehearse the format. They are not official Maryland assessment items. MSTAR — Maryland's new state test, first given in spring 2027 — uses the same kinds of questions you see here: selected response, select-all, two-part evidence questions, and written responses.*

## Part A — Skills Check

Warm up with the lesson's core skills — one best answer each.

**Question 1** SELECTED RESPONSE · 1 POINT

What is the reciprocal of 3/5?

(A) 1/3

(B) 3/5

(C) 5/3

(D) 5/5

**Question 2** SELECTED RESPONSE · 1 POINT

What is 1/2 ÷ 1/4?

(A) 1/8

(B) 1/2

(C) 2

(D) 4

**Question 3** SELECTED RESPONSE · 1 POINT

What is 3/4 ÷ 1/8?

(A) 3/32

(B) 6

(C) 8/3

(D) 24

**Question 4** SELECTED RESPONSE · 1 POINT

What is the first step in evaluating 2 1/2 ÷ 1/4?

(A) Rewrite 2 1/2 as the improper fraction 5/2

(B) Flip 2 1/2 to 1/2 2

(C) Divide 2 by 1/4 and ignore the half

(D) Add 2 + 1/2 + 1/4

**Question 5** SELECTED RESPONSE · 1 POINT

What is 2/3 ÷ 1/3?

(A) 1/2

(B) 2

(C) 2/9

(D) 6

**Question 6** SELECTED RESPONSE · 1 POINT

A recipe needs 2/3 cup of sugar. You only have a 1/6-cup scoop. How many scoops do you need?

(A) 2 scoops

(B) 3 scoops

(C) 4 scoops

(D) 6 scoops

## Part B — Test-Format Questions

These match the state test's formats: two-part questions, select-all, and written responses.

**Question 7** TWO-PART QUESTION

### Part A

What is the value of 2 1/4 ÷ 3/8?

*Fill in the bubble next to the one best answer.*

(A) 1/6

(B) 2 2/3

(C) 6

(D) 27/32

### Part B

*Answer Part A before Part B — Part B asks about your reasoning.*

Which reasoning shows why your answer to Part A is correct?

(A) Divide only the fraction parts, 1/4 ÷ 3/8 = 2/3, then put the whole number 2 back in front to get 2 2/3.

(B) Change 2 1/4 to 9/4. Keep 9/4, change ÷ to ×, flip 3/8 to 8/3: 9/4 × 8/3 = 72/12 = 6.

(C) Change 2 1/4 to 9/4, then multiply straight across without flipping: 9/4 × 3/8 = 27/32.

(D) Change 2 1/4 to 9/4, then flip the first fraction instead of the second: 4/9 × 3/8 = 1/6.

**Question 8** WRITTEN RESPONSE · 2 POINTS

**Type II Reasoning: Flipping the Wrong Fraction**

> Marisol divided 5/6 ÷ 2/3. Her work was: 6/5 × 2/3 = 12/15 = 4/5. She wrote that the quotient is 4/5.

Explain Marisol's misconception and give the correct quotient.

*Write your answer in complete sentences. Show or explain your mathematical thinking.*

## Part C — Show Your Thinking

Answer in writing, the way the state test's constructed responses work.

**Question 9** WRITTEN RESPONSE · 2 POINTS

Is 3/4 ÷ 1/2 the same as 1/2 ÷ 3/4? Solve both and explain why or why not. What does this tell you about the order in division?

*Write your answer in complete sentences. Show or explain your mathematical thinking.*

When you finish, check your reasoning with your teacher or family. Your teacher has the scoring guide for the written responses.