MSTAR PRACTICE WORKSHEET

Lesson 6-1: Division Expressions with Fractions and Whole 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 does 3 ÷ 1/4 mean?

(A) How many 1/4-size pieces fit into 3

(B) 1/4 of 3

(C) 3 groups of 1/4

(D) 3 minus 1/4

Question 2 SELECTED RESPONSE · 1 POINT

Which expression means 'how many 1/3-size pieces are in 2'?

(A) 1/3 ÷ 2

(B) 2 ÷ 1/3

(C) 2 × 1/3

(D) 2 + 1/3

Question 3 SELECTED RESPONSE · 1 POINT

A rope is 4 feet long. How many 1/2-foot pieces can be cut from it?

(A) 1/2 piece

(B) 2 pieces

(C) 4 pieces

(D) 8 pieces

Question 4 SELECTED RESPONSE · 1 POINT

A half-pan of brownies is shared equally among 4 people. How much of the whole pan does each get?

(A) 1/8

(B) 1/2

(C) 2

(D) 4/2

Question 5 SELECTED RESPONSE · 1 POINT

Agent Cole has 3/4 of a pound of fingerprint powder and splits it equally into 2 kits. How much powder goes in each kit?

(A) 1 1/2 pounds

(B) 1/8 pound

(C) 3/8 pound

(D) 3/4 pound

Question 6 SELECTED RESPONSE · 1 POINT

What is 2/3 ÷ 4?

(A) 1/6

(B) 2/7

(C) 3/8

(D) 8/3

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 6 ÷ 1/5?

Fill in the bubble next to the one best answer.

(A) 1/30

(B) 6/5

(C) 11

(D) 30

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) Keep 1/5, change ÷ to ×, and flip 6/1 to 1/6: 1/5 × 1/6 = 1/30.

(B) Write 6 as 6/1. Keep 6/1, change ÷ to ×, flip 1/5 to 5/1, then multiply across: 6/1 × 5/1 = 30.

(C) Write 6 as 6/1 and multiply straight across without flipping: 6/1 × 1/5 = 6/5.

(D) Add the whole number and the denominator of the fraction: 6 + 5 = 11.

Question 8 SELECT ALL THAT APPLY

Select ALL statements that are true about the expression 4 ÷ 1/3.

Mark the box next to EVERY answer that is true. More than one is correct.

[A] The whole number 4 can be written as the fraction 4/1.

[B] Keep, change, flip rewrites the expression as 4/1 × 3/1.

[C] The reciprocal of 1/3 is 3/1.

[D] The quotient is 4/3.

[E] The quotient is 12.

[F] The quotient must be less than 4 because the expression uses division.

Part C — Show Your Thinking

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

Question 9 WRITTEN RESPONSE · 2 POINTS

Dividing 6 by 1/2 gives 12, but dividing 6 by 2 gives 3. How can dividing by a smaller number (1/2) give a bigger answer than dividing by a larger number (2)? Explain using a real-world example.

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.