MSTAR PRACTICE WORKSHEET

Lesson 6-11: Fraction Division Problem Solving

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

A ribbon is 4/5 of a yard long. Each bow uses 1/10 of a yard. Which equation finds how many bows can be made?

(A) 1/10 ÷ 4/5

(B) 4/5 ÷ 1/10

(C) 4/5 × 1/10

(D) 4/5 + 1/10

Question 2 SELECTED RESPONSE · 1 POINT

A detective has 1/2 gallon of solution. Each test uses 1/8 gallon. How many tests can be run?

(A) 1/16

(B) 1/4

(C) 4

(D) 16

Question 3 SELECTED RESPONSE · 1 POINT

A trail is 3/4 mile long. A jogger runs laps of 1/4 mile each. How many laps does the jogger complete?

(A) 1/3 lap

(B) 3 laps

(C) 3/16 lap

(D) 4 laps

Question 4 SELECTED RESPONSE · 1 POINT

A board is 5/6 foot long. Each shelf bracket needs 1/6 foot. How many brackets fit?

(A) 1/36

(B) 5

(C) 5/36

(D) 6

Question 5 SELECTED RESPONSE · 1 POINT

Marcus solved 2/3 ÷ 1/4 and got 8/3 = 2 2/3. He says 'That can't be right because I started with less than 1.' Is Marcus's math correct? Is his reasoning correct?

(A) His math and reasoning are both correct — the answer should be less than 1

(B) His math is wrong — the answer should be 1/6

(C) His math is correct (2 2/3), but his reasoning is wrong — dividing by a small fraction gives a larger result

(D) His math is wrong — the answer should be 8/12

Question 6 SELECTED RESPONSE · 1 POINT

Room 1 — Evidence Locker: Agent Torres has 7/8 pound of casting clay to lift footprints. Each cast uses 1/8 pound. How many casts can she make to unlock the door?

(A) 1/7

(B) 6

(C) 7

(D) 8

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

A ribbon is 4 1/2 feet long. Marta cuts the whole ribbon into pieces that are each 3/4 foot long. How many pieces does she get?

Fill in the bubble next to the one best answer.

(A) 1/6 of a piece

(B) 3 3/8 pieces

(C) 5 1/4 pieces

(D) 6 pieces

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 the size of each piece by the total length: 3/4 ÷ 9/2 = 3/4 × 2/9 = 6/36 = 1/6.

(B) Add the total length and the size of each piece: 4 1/2 + 3/4 = 5 1/4.

(C) The total amount is the dividend and the size of each group is the divisor, so total ÷ size = number of groups: 9/2 ÷ 3/4 = 9/2 × 4/3 = 36/6 = 6.

(D) Multiply the total length by the size of each piece: 9/2 × 3/4 = 27/8 = 3 3/8.

Question 8 SELECT ALL THAT APPLY

A jug holds 3/4 gallon of juice. Each cup holds 1/8 gallon. Select ALL statements that correctly describe this situation.

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

[A] The dividend is 3/4 gallon, the total amount of juice in the jug.

[B] The divisor is 1/8 gallon, the size of one group.

[C] The equation that models the situation is 3/4 ÷ 1/8.

[D] The jug fills 6 cups.

[E] The answer is 3/32 gallon.

[F] The answer must be less than 1 because both numbers in the problem are less than 1.

Part C — Show Your Thinking

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

Question 9 WRITTEN RESPONSE · 2 POINTS

Write your own fraction division word problem where the answer is 8. Then show the equation, solve it step by step, and explain how you know your answer is reasonable.

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.