MSTAR PRACTICE WORKSHEET

Lesson 2-7: Divide Decimals Using an Algorithm

Grade 6 Mathematics · Standard 6.NOS.3

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 14.4 ÷ 1.2?

(A) 0.12

(B) 1.2

(C) 12

(D) 120

Question 2 SELECTED RESPONSE · 1 POINT

What is 3.78 ÷ 0.6?

(A) 0.063

(B) 0.63

(C) 6.3

(D) 63

Question 3 SELECTED RESPONSE · 1 POINT

What is 8.4 ÷ 0.7?

(A) 0.12

(B) 1.2

(C) 12

(D) 120

Question 4 SELECTED RESPONSE · 1 POINT

What is 15.6 ÷ 1.3?

(A) 1.2

(B) 12

(C) 13

(D) 120

Question 5 SELECTED RESPONSE · 1 POINT

A water tank holds 19.2 liters. It is poured into bottles that each hold 1.6 liters. How many bottles can be filled?

(A) 1.2 bottles

(B) 11 bottles

(C) 12 bottles

(D) 13 bottles

Question 6 SELECTED RESPONSE · 1 POINT

What is 4.8 ÷ 0.6?

(A) 0.8

(B) 4.2

(C) 8

(D) 80

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

Find 18.9 ÷ 6.3 using the decimal division algorithm.

Fill in the bubble next to the one best answer.

(A) 0.3

(B) 2.8

(C) 3

(D) 30

Part B

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

Why does sliding BOTH decimal points the same number of places leave the quotient unchanged?

(A) The decimal point does not affect division.

(B) Only the divisor matters in a division problem.

(C) The quotient always doubles when you slide a point.

(D) Multiplying the dividend and the divisor by the same power of ten produces an equivalent division.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Moving Only One Point

> Bianca computed 7.5 ÷ 0.5. She slid the divisor's point to make it 5, but left the dividend as 7.5, and wrote '7.5 ÷ 5 = 1.5.'

Explain Bianca'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

A gas station sells fuel at $3.45 per gallon. A customer pays $27.60 total. How many gallons did the customer buy? Set up the decimal division, show how to convert it to whole-number division, and solve.

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.