MSTAR PRACTICE WORKSHEET

Lesson 6-12: Least Common Multiple

Grade 6 Mathematics · Standard 6.NOS.4

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 LCM of 3 and 5?

(A) 3

(B) 5

(C) 15

(D) 30

Question 2 SELECTED RESPONSE · 1 POINT

What is the LCM of 6 and 8?

(A) 6

(B) 14

(C) 24

(D) 48

Question 3 SELECTED RESPONSE · 1 POINT

What is the LCM of 4 and 10?

(A) 2

(B) 10

(C) 20

(D) 40

Question 4 SELECTED RESPONSE · 1 POINT

What is the LCM of 2 and 7?

(A) 2

(B) 7

(C) 9

(D) 14

Question 5 SELECTED RESPONSE · 1 POINT

Two buses leave the station at 8:00 AM. Bus A returns every 15 minutes and Bus B returns every 20 minutes. When is the next time both buses are at the station together?

(A) 8:30 AM (30 minutes later)

(B) 8:40 AM (40 minutes later)

(C) 9:00 AM (60 minutes later)

(D) 9:20 AM (80 minutes later)

Question 6 SELECTED RESPONSE · 1 POINT

One machine runs every 4 min, another every 6 min. They just ran together. In how many minutes do they run together again?

(A) 6

(B) 10

(C) 12

(D) 24

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 least common multiple of 6 and 8?

Fill in the bubble next to the one best answer.

(A) 2

(B) 14

(C) 24

(D) 48

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) Multiply the two numbers together, 6 × 8 = 48, because the product is always the least common multiple.

(B) Find the largest number that divides both 6 and 8, which is 2.

(C) Add the two numbers, 6 + 8 = 14.

(D) Skip count starting with the larger number: 8, 16, 24. Then skip count by 6: 6, 12, 18, 24. The first non-zero multiple in both lists is 24.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Multiplying Instead of Listing

> Sofia found the least common multiple of 4 and 10 by multiplying the two numbers: 4 × 10 = 40. She wrote that the least common multiple of 4 and 10 is 40.

Explain Sofia's misconception and give the correct least common multiple.

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

You are making party favors. Glow sticks come in packs of 10 and bracelets come in packs of 4. What is the fewest of each you can buy so every favor has exactly one glow stick and one bracelet with none left over? Explain how the LCM solves this problem.

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.