MSTAR PRACTICE WORKSHEET

Lesson 6-14: The Distributive Property

Grade 6 Mathematics · Standard 6.AT.7

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

Expand 6(n + 3) using the distributive property.

(A) 6n + 18

(B) 6n + 3

(C) 6n + 9

(D) n + 18

Question 2 SELECTED RESPONSE · 1 POINT

Expand 4(5 – 2) using the distributive property.

(A) 9

(B) 12

(C) 20 – 2

(D) 22

Question 3 SELECTED RESPONSE · 1 POINT

Expand 3(x + 4) using the distributive property.

(A) 3x + 12

(B) 3x + 4

(C) 7x

(D) x + 12

Question 4 SELECTED RESPONSE · 1 POINT

When using the distributive property with a(b + c), you must multiply 'a' by:

(A) Only b

(B) Only c

(C) b + c first, then multiply

(D) Both b and c

Question 5 SELECTED RESPONSE · 1 POINT

Light Cue 1: Expand 3(x + 4) for the stage-light controller.

(A) 3x + 12

(B) 3x + 4

(C) 3x + 7

(D) x + 12

Question 6 SELECTED RESPONSE · 1 POINT

Light Cue 2: Expand 5(2 + n) to set two spotlight banks.

(A) 7 + 5n

(B) 10 + 5n

(C) 10 + n

(D) 10 + 5

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

Which expression is equivalent to 6(2x + 5)?

Fill in the bubble next to the one best answer.

(A) 2x + 30

(B) 12x + 30

(C) 12x + 5

(D) 12x + 11

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 outside factor by the second term only and copy the first term: 2x + 30.

(B) Multiply the outside factor by every term inside the parentheses: 6 · 2x = 12x and 6 · 5 = 30, giving 12x + 30.

(C) Multiply 6 by 2x, then add 6 and 5 instead of multiplying them: 12x + 11.

(D) Multiply the outside factor by the first term only and copy the second term: 12x + 5.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Pulling Out a Smaller Factor

> Elena was asked to factor 18m + 24 completely. She wrote 18m + 24 = 2(9m + 12) and said she was finished because 2 divides both terms.

Explain Elena's misconception and give the completely factored expression.

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

Use the distributive property to explain why 6 × 98 can be calculated as 6 × 100 − 6 × 2 = 588. Then create your own example of using the distributive property to make multiplication easier.

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.