MSTAR PRACTICE WORKSHEET

Lesson 6-15: Simplify Algebraic Expressions

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

Simplify 7x + 3x.

(A) 10x

(B) $10x^2$

(C) 21x

(D) 73x

Question 2 SELECTED RESPONSE · 1 POINT

Simplify 9n + 4 + 2n.

(A) 11n + 4

(B) $11n^2 + 4$

(C) 15n

(D) 92n + 4

Question 3 SELECTED RESPONSE · 1 POINT

Which pair are like terms?

(A) 6x and 2x

(B) 6x and 6y

(C) 6x and 6

(D) 6x and $2x^2$

Question 4 SELECTED RESPONSE · 1 POINT

Simplify 5a + 3 + 2a.

(A) 7a + 3

(B) $7a^2 + 3$

(C) 10a

(D) 52a + 3

Question 5 SELECTED RESPONSE · 1 POINT

The board shows 3x + 5x on one channel. Simplify it.

(A) 8x

(B) $8x^2$

(C) 15x

(D) 35x

Question 6 SELECTED RESPONSE · 1 POINT

Simplify the track: 4a + 2 + a.

(A) 5a + 2

(B) $5a^2 + 2$

(C) 6a

(D) 7a

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

Simplify the expression 8x + 3 + 2x – 1.

Fill in the bubble next to the one best answer.

(A) 6x + 2

(B) 10x + 2

(C) 10x + 4

(D) 12x

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) 8x and 2x share the same variable part, so add their coefficients to get 10x. The constants 3 and –1 combine separately to 2, giving 10x + 2.

(B) Combine every number in the expression into one coefficient: 8 + 3 + 2 – 1 = 12, giving 12x.

(C) Subtract the coefficients of the variable terms: 8 – 2 = 6, giving 6x + 2.

(D) Add the coefficients of the variable terms and then add both constants: 10x + 4.

Question 8 SELECT ALL THAT APPLY

Select ALL statements that are true about the expression 5y + 7 + 3y + y.

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

[A] 5y, 3y, and y are like terms.

[B] The coefficient of the term y is 1.

[C] The simplified expression is 9y + 7.

[D] The simplified expression is 16y.

[E] 7 is a constant and cannot be combined with the y terms.

[F] The simplified expression is 8y + 7.

Part C — Show Your Thinking

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

Question 9 WRITTEN RESPONSE · 2 POINTS

Three students simplified $4x + 3 + 2x + 5 + x$ differently. Student A got $7x + 8$. Student B got $7x^2 + 8$. Student C got $6x + 9$. Who is correct? Explain the mistakes the other two students made.

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.