MSTAR PRACTICE WORKSHEET

Lesson 6-8: Generate Equivalent 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

Which property is shown? 5 + 13 = 13 + 5

(A) Commutative Property

(B) Associative Property

(C) Identity Property

(D) Distributive Property

Question 2 SELECTED RESPONSE · 1 POINT

Which property is shown? (6 × 3) × 2 = 6 × (3 × 2)

(A) Commutative Property

(B) Identity Property

(C) Associative Property

(D) Distributive Property

Question 3 SELECTED RESPONSE · 1 POINT

Which property is shown? 47 + 0 = 47

(A) Commutative Property

(B) Associative Property

(C) Distributive Property

(D) Identity Property

Question 4 SELECTED RESPONSE · 1 POINT

Which property lets you rearrange 8 × 5 to 5 × 8?

A Associative Property

B Identity Property

C Distributive Property

D Commutative Property

Question 5 SELECTED RESPONSE · 1 POINT

Track 2 on the playlist plays 5(7 + 2) = 5 × 7 + 5 × 2. Which property is this?

A Commutative Property

B Associative Property

C Identity Property

D Distributive Property

Question 6 SELECTED RESPONSE · 1 POINT

Track 3 plays (7 + 3) + 5 = 7 + (3 + 5). Only the parentheses moved. Which property is this?

A Commutative Property

B Distributive Property

C Associative Property

D Identity Property

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 property of operations is shown by the equation (7 + 4) + 6 = 7 + (4 + 6)?

Fill in the bubble next to the one best answer.

(A) Commutative Property of Addition

(B) Identity Property of Addition

(C) Distributive Property

(D) Associative Property of Addition

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) The addends appear in a different order on the two sides, which is the commutative property.

(B) Adding zero leaves a number unchanged, which is the identity property.

(C) A factor outside the parentheses is multiplied by each term inside, which is the distributive property.

(D) The addends appear in the same order on both sides, but the parentheses move. Changing the grouping without changing the sum is the associative property, and both sides equal 17.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Regrouping a Subtraction

> Jamal wrote (20 – 8) – 5 = 20 – (8 – 5). He said the associative property lets him move the parentheses anywhere, so both sides must have the same value of 7.

Explain Jamal's misconception and give the correct value of each side.

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

Explain why the commutative property works for addition and multiplication but NOT for subtraction and division. Give a specific number example for each operation to prove your point.

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.