MSTAR PRACTICE WORKSHEET

Lesson 9-3: Write Equations to Represent Relationships Between Two Variables

Grade 6 Mathematics · Standard 6.AT.11

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

Recreation World charges $24.95 per month. What is the total cost of 2 months of membership?

(A) $24.95

(B) $26.95

(C) $49.90

(D) $74.85

Question 2 SELECTED RESPONSE · 1 POINT

In the equation c = 24.95m for the gym membership, what does m represent?

(A) The number of months of membership

(B) The total cost in dollars

(C) The monthly fee of $24.95

(D) The name of the gym

Question 3 SELECTED RESPONSE · 1 POINT

A canoe rents for $15 per hour. Let h = hours and c = total cost. Which equation represents the relationship?

(A) c = 15h

(B) c = 15 + h

(C) h = 15c

(D) c = h − 15

Question 4 SELECTED RESPONSE · 1 POINT

Using c = 15h, what is the total cost of a 3-hour canoe rental?

(A) $15

(B) $18

(C) $45

(D) $75

Question 5 SELECTED RESPONSE · 1 POINT

In the gym membership situation, which quantity is the DEPENDENT variable?

(A) The number of months

(B) The total cost

(C) The monthly fee of $24.95

(D) The number of gyms in town

Question 6 SELECTED RESPONSE · 1 POINT

The membership table shows: 1 month, $24.95; 2 months, $49.90; 3 months, $74.85. By how much does the total cost increase each month?

(A) $24.05

(B) $24.95

(C) $25.00

(D) $49.90

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

A spin studio charges $7.50 for each class. Let n be the number of classes a member takes and let c be the total cost in dollars. Which equation represents the relationship?

Fill in the bubble next to the one best answer.

(A) c = 7.5 + n

(B) n = 7.5c

(C) c = n ÷ 7.5

(D) c = 7.5n

Part B

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

Which reasoning justifies the equation chosen in Part A?

(A) The number of classes is added to the price of one class, so 4 classes cost 7.5 + 4 = $11.50.

(B) The number of classes depends on the cost, so the classes belong alone on the left side of the equation.

(C) The $7.50 is shared among the classes, so 4 classes cost 7.5 ÷ 4 = $1.875 each.

(D) The $7.50 is charged for every single class, so the total is 7.5 times the classes; 4 classes cost 7.5 × 4 = $30.

Question 8 SELECT ALL THAT APPLY

A community pool charges $9 for each hour of lane rental. Let h be the number of hours rented and let c be the total cost in dollars. Select ALL statements that correctly represent this relationship.

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

[A] c = 9h

[B] h = 9c

[C] The total cost is 9 times the number of hours rented.

[D] c = 9 + h

[E] In the equation, h stands for the number of hours rented and c stands for the total cost in dollars.

[F] In the equation, c stands for the $9 charged for each hour.

When you finish, check your reasoning with your teacher or family. Your teacher has the scoring guide for the written responses.