MSTAR PRACTICE WORKSHEET

Lesson 9-2: Analyze Graphs of 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

Football tickets cost $45 each. What is the total cost of 3 tickets?

A $45

B $48

C $90

D $135

Question 2 SELECTED RESPONSE · 1 POINT

Which ordered pair belongs on the ticket graph for 2 tickets?

A (2, 90)

B (2, 45)

C (2, 47)

D (90, 2)

Question 3 SELECTED RESPONSE · 1 POINT

On the ticket graph, what should the two axes be labeled?

A Number of tickets and price of one ticket

B Number of tickets and total cost

C Total cost and $45

D Number of games and number of tickets

Question 4 SELECTED RESPONSE · 1 POINT

The Sandia Peak tram travels 1,200 feet each minute. How far has it traveled after 3 minutes?

(A) 1,200 feet

(B) 1,203 feet

(C) 2,400 feet

(D) 3,600 feet

Question 5 SELECTED RESPONSE · 1 POINT

A table shows a train traveling 48 kilometers every hour: 1 hour, 48 km; 5 hours, 240 km. How many kilometers does it travel in 2 hours?

(A) 48 km

(B) 50 km

(C) 96 km

(D) 144 km

Question 6 SELECTED RESPONSE · 1 POINT

As the number of tickets purchased increases, the total cost...

(A) decreases

(B) stays the same

(C) cannot be determined

(D) increases

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 stadium shuttle carries fans from the parking lot. The table pairs the number of trips with the total fans carried: 2 trips with 96 fans, 5 trips with 240 fans, and 8 trips with 384 fans. On a graph with trips on the horizontal axis and fans on the vertical axis, which ordered pair belongs to 3 trips?

Fill in the bubble next to the one best answer.

- (A) (3, 51)
- (B) (3, 144)
- (C) (3, 48)
- (D) (144, 3)

Part B

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

Which explanation justifies the ordered pair chosen in Part A?

- (A) The larger number always comes first in an ordered pair, so the fans are written before the trips.
- (B) The shuttle carries 48 fans on each trip, and trips come first in the ordered pair, so 3 trips pair with $3 \times 48 = 144$ fans.
- (C) The rate of 48 fans is what gets plotted, so 3 trips pair with 48 fans.
- (D) The trips and the fans are added, so 3 trips pair with $48 + 3 = 51$ fans.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Reversed Coordinates

> Ramona is graphing sales at the stadium pretzel stand. Pretzels cost $6 each, and her table shows 1 pretzel with $6, 2 pretzels with $12, and 3 pretzels with $18. She labels the horizontal axis 'number of pretzels' and the vertical axis 'total cost'. For 3 pretzels she plots the point (18, 3).

Explain Ramona's misconception and give the correct ordered pair for 3 pretzels.

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.