MSTAR PRACTICE WORKSHEET

Lesson 3-5: Compare Ratio Relationships

Grade 6 Mathematics · Standard 6.AT.3

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

Chef A uses 2 cups of cheese for every 8 crackers. Chef B uses 3 cups of cheese for every 9 crackers. Who uses more cheese per cracker?

(A) Chef A

(B) Chef B

(C) They use the same amount

(D) Cannot determine

Question 2 SELECTED RESPONSE · 1 POINT

Which ratio is greater: 3:4 or 5:8?

(A) 5:8

(B) 3:4

(C) They are equal

(D) Cannot determine

Question 3 SELECTED RESPONSE · 1 POINT

Which lemonade recipe is more lemony? Recipe A: 2 lemons for 6 cups of water. Recipe B: 3 lemons for 7 cups of water.

(A) Recipe B

(B) Recipe A

(C) They are the same

(D) Cannot determine

Question 4 SELECTED RESPONSE · 1 POINT

Which is the better deal: 4 apples for $3 or 6 apples for $5?

(A) 6 apples for $5

(B) 4 apples for $3

(C) They cost the same

(D) Cannot determine

Question 5 SELECTED RESPONSE · 1 POINT

Store A sells 3 mangoes for $6. Store B sells 5 mangoes for $9. Which store offers a better price per mango?

(A) Store A

(B) Same price

(C) Store B

(D) Cannot determine

Question 6 SELECTED RESPONSE · 1 POINT

Chef Academy's snack bar sells 3 mini quiches for $6 or 5 mini quiches for $8. Which is the better deal per quiche?

(A) 3 quiches for $6

(B) 5 quiches for $8

(C) They cost the same

(D) Cannot determine

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

Car A travels 180 miles on 6 gallons. Car B travels 225 miles on 9 gallons. Which car gets better gas mileage?

Fill in the bubble next to the one best answer.

- (A) Car B, at 25 miles per gallon
- (B) Car B, because it traveled farther
- (C) They are equal
- (D) Car A, at 30 miles per gallon

Part B

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

Why is comparing total miles alone NOT enough to decide which car is more efficient?

- (A) Total miles is never a useful measurement.
- (B) The car with fewer miles is always more efficient.
- (C) The cars used different amounts of gas, so the totals are not comparable until each is expressed per gallon.
- (D) Efficiency depends only on the size of the gas tank.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Comparing Totals Instead of Rates

> Jaden compared two paint sizes: a 3-gallon can for $54 and a 5-gallon can for $85. He wrote: 'The 3-gallon can is the better deal because $54 is less than $85.'

Explain Jaden's misconception and determine which can is actually the better deal.

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

Store A sells 5 notebooks for $12. Store B sells 8 notebooks for $20. Without calculating, a student says Store B must be cheaper because you get more notebooks. Is the student's reasoning valid? Find the unit rates to prove your answer.

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.