MSTAR PRACTICE WORKSHEET

Lesson 3-8: Solve Problems with Unit Rates

Grade 6 Mathematics · Standard 6.AT.2

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 is the better buy: 6 bouncy balls for $4.50 or 10 bouncy balls for $8.00?

(A) 10 for $8.00 — $0.80 each

(B) They cost the same per ball

(C) Not enough information

(D) 6 for $4.50 — $0.75 each

Question 2 SELECTED RESPONSE · 1 POINT

A faucet drips 15 ounces of water in 5 minutes. What is the unit rate?

(A) 0.33 ounces per minute

(B) 3 ounces per minute

(C) 5 ounces per minute

(D) 15 ounces per minute

Question 3 SELECTED RESPONSE · 1 POINT

A printer prints 42 pages in 6 minutes. How many pages does it print in 15 minutes at the same rate?

(A) 70 pages

(B) 90 pages

(C) 105 pages

(D) 120 pages

Question 4 SELECTED RESPONSE · 1 POINT

Store A sells 5 notebooks for $8. Store B sells 3 notebooks for $5.25. Which has the lower price per notebook?

(A) Store B ($1.75 each)

(B) Store A ($1.60 each)

(C) Same price

(D) Cannot determine

Question 5 SELECTED RESPONSE · 1 POINT

A machine dispenses 24 tokens in 3 minutes. At this rate, how many tokens does it dispense in 10 minutes?

(A) 60 tokens

(B) 72 tokens

(C) 80 tokens

(D) 240 tokens

Question 6 SELECTED RESPONSE · 1 POINT

A factory produces 360 widgets in 8 hours. At the same rate, how many widgets are produced in a 12-hour shift?

(A) 360 widgets

(B) 480 widgets

(C) 540 widgets

(D) 720 widgets

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 store sells 8 notebooks for $20. At the same unit price, what is the cost of 14 notebooks?

Fill in the bubble next to the one best answer.

(A) $26.00

(B) $28.00

(C) $35.00

(D) $40.00

Part B

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

Which sequence of steps solves Part A?

(A) Multiply the total cost by the new quantity, then divide by the old quantity's units.

(B) Add the difference in notebooks to the original price.

(C) Divide the total cost by the quantity to find the unit price, then multiply by the new quantity.

(D) Subtract the quantities and multiply by the total cost.

Question 8 WRITTEN RESPONSE · 2 POINTS

Type II Reasoning: Adding Instead of Scaling

> Rosa knew 8 notebooks cost $20 and wanted the cost of 14 notebooks. She wrote: '14 is 6 more than 8, so add $6: the cost is $26.'

Explain Rosa's misconception and give the correct cost.

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

Two arcade supply companies offer token deals. Company X: 300 tokens for $36. Company Y: 500 tokens for $55. The arcade needs 1,000 tokens. Find the unit rate for each company, determine which is cheaper per token, and calculate the total cost of buying 1,000 tokens from the better deal.

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.