MSTAR PRACTICE WORKSHEET

Lesson 5-3: Determine the Area of Trapezoids

Grade 6 Mathematics · Standard 6.GR.1

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

What is the area of a trapezoid with bases 6 cm and 10 cm, and height 4 cm?

(A) 24 sq cm

(B) 32 sq cm

(C) 40 sq cm

(D) 64 sq cm

Question 2 SELECTED RESPONSE · 1 POINT

A trapezoid has an area of 45 sq ft, bases of 7 ft and 11 ft. What is the height?

(A) 3 ft

(B) 5 ft

(C) 9 ft

(D) 10 ft

Question 3 SELECTED RESPONSE · 1 POINT

What is the first step when finding the area of a trapezoid?

(A) Multiply the two bases

(B) Subtract the shorter base from the longer base

(C) Add the two bases together

(D) Divide the height by 2

Question 4 SELECTED RESPONSE · 1 POINT

A trapezoid has bases of 5 in and 9 in, and a height of 6 in. What is its area?

(A) 27 sq in

(B) 30 sq in

(C) 42 sq in

(D) 84 sq in

Question 5 SELECTED RESPONSE · 1 POINT

Blueprint 1: A trapezoidal lobby window has bases of 6 ft and 10 ft and a height of 4 ft. What is its area for the glass order?

(A) 16 sq ft

(B) 32 sq ft

(C) 40 sq ft

(D) 60 sq ft

Question 6 SELECTED RESPONSE · 1 POINT

Blueprint 2: A trapezoidal skylight has bases of 9 ft and 7 ft and a height of 6 ft. What is its area?

(A) 44 sq ft

(B) 48 sq ft

(C) 63 sq ft

(D) 96 sq ft

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 trapezoidal window has parallel edges of 4 feet and 8 feet and a height of 5 feet. What is its area?

Fill in the bubble next to the one best answer.

- (A) 17 square feet
- (B) 20 square feet
- (C) 30 square feet
- (D) 60 square feet

Part B

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

What does the quantity $(b_1 + b_2) \div 2$ represent in the trapezoid area formula?

- (A) The average length of the two parallel bases.
- (B) The perimeter of the trapezoid.
- (C) The length of the slanted side.
- (D) The height of the trapezoid.

Question 8 SELECT ALL THAT APPLY

Select ALL statements that are true about trapezoids and their area:

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

- [A] A trapezoid has exactly one pair of parallel sides called bases.
- [B] The height is measured perpendicular to both parallel bases.
- [C] The two bases must be equal in length.
- [D] A trapezoid can be split into two triangles to find its area.
- [E] Area = ½ × $(b_1 + b_2)$ × h.

Part C — Show Your Thinking

Answer in writing, the way the state test's constructed responses work.

Question 9 WRITTEN RESPONSE · 2 POINTS

A trapezoid and a parallelogram both have a height of 8 ft. The trapezoid has bases of 5 ft and 11 ft. The parallelogram has a base of 7 ft. Which shape has the greater area? Explain your reasoning using the formulas.

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.