

Grade 3 · Area · Test Answer Key

Common Core 3.MD.C.5, 3.MD.C.6, 3.MD.C.7 · mathovore.fr

Worked solutions and a scoring guide for the Grade 3 area test. Each answer shows the multiplication or the split into rectangles, and the scoring note tells how many points each step earns out of 20.

Grade 3 Common Core: 3.MD.C.5 · 3.MD.C.6 · 3.MD.C.7

Question 1: Counting unit squares (2 points)

(a) 4 rows of 6 squares: **24 square centimeters**.

(b) $4 \times 6 = 24$ (or $6 \times 4 = 24$).

Scoring: 1 point for 24 square centimeters with the correct unit, 1 point for a correct multiplication sentence.

Question 2: Area with units (2 points)

(a) $9 \times 4 = 36$. The area is **36 square inches**.

(b) $6 \times 6 = 36$. The area is **36 square centimeters**.

Scoring: 1 point for each correct area written with square units. Give no point for 36 without square units.

Question 3: Missing side lengths (2 points)

(a) $7 \times 9 = 63$, so the length is **9 feet**.

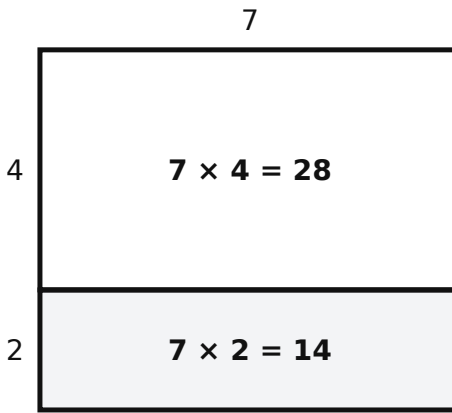
(b) $8 \times 9 = 72$, so the width is **9 meters**.

Scoring: 1 point for each correct side length with its unit. Division or a missing-factor equation are both accepted.

Question 4: Splitting a rectangle (2 points)

(a) Top: $7 \times 4 = 28$. Bottom: $7 \times 2 = 14$. The areas are **28 and 14 square units**.

(b) $28 + 14 = 42$. The whole area is **42 square units**. Check: $7 \times 6 = 42$.



$$28 + 14 = 42 \text{ square units.}$$

Scoring: 1 point for both part areas, 1 point for the total of 42 square units.

Question 5: Distributive property (2 points)

$$7 \times 8 = 7 \times (5 + 3) = (7 \times 5) + (7 \times 3).$$

$35 + 21 = 56$. The product is **56**.

Scoring: 1 point for the two correct partial products 35 and 21, 1 point for the correct total 56.

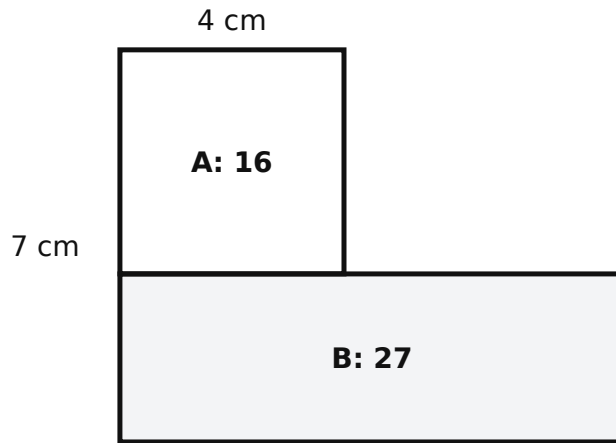
Question 6: Area of an L-shape (3 points)

Split the figure into a square on top and a rectangle on the bottom. The top part is $7 - 3 = 4$ cm tall, and it is 4 cm wide.

$$\text{Top: } 4 \times 4 = 16. \text{ Bottom: } 9 \times 3 = 27.$$

$$16 + 27 = 43.$$

The area is **43 square centimeters**.



$$16 + 27 = 43 \text{ square centimeters.}$$

Scoring: 1 point for a correct split into rectangles, 1 point for both rectangle areas (16 and 27), 1 point for the total of 43 square centimeters.

Question 7: Compare two rectangles (2 points)

A: $11 \times 4 = 44$ sq ft. B: $7 \times 6 = 42$ sq ft.

$$44 > 42 \text{ and } 44 - 42 = 2.$$

Scoring: 1 point for both areas (44 and 42), 1 point for naming Rectangle A with a difference of 2 square feet.

Question 8: Mulch for a garden (2 points)

Area: $12 \times 5 = 60$ sq ft.

Each bag covers 10 square feet: $60 \div 10 = 6$. She needs **6 bags**.

Scoring: 1 point for the area of 60 square feet, 1 point for 6 bags.

Question 9: Same area (3 points)

(a) $8 \times 3 = 24$. The width is **3 units**.

(b) Pairs that multiply to 24 are 1×24 , 2×12 and 4×6 . **Any two of these pairs are correct.**

Scoring: 1 point for a width of 3 units. 1 point for each correct pair in part (b), up to 2 points. A pair must multiply to 24, and 3 by 8 does not count as a new pair.

Total	
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20 points