

Grade 3 · Area · Worksheet Answer Key

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

Full worked solutions for all 22 area problems. Each answer shows the multiplication sentence or the split into rectangles, so students can find exactly where a mistake happened and fix it.

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

Problem 1: Count the unit squares

There are 3 rows with 5 squares in each row. Count: 5, 10, 15. Or multiply: $3 \times 5 = 15$.

The area is **15 square centimeters**.

Problem 2: Rows and columns

There are 4 rows and 7 columns, so $4 \times 7 = 28$.

The area is **28 square inches**.

Problem 3: Tiles in rows

4 rows of 6 tiles: $4 \times 6 = 24$.

The area is **24 square feet**.

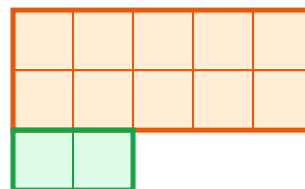
Problem 4: Compare two shapes

Shape A: $3 \times 4 = 12$ square units. Shape B: split into a 5 by 2 rectangle and a 2 by 1 rectangle, so $10 + 2 = 12$ square units.

Both areas are 12, so **yes, the shapes have the same area (12 square units)**.



Shape A: 12



Shape B: $10 + 2 = 12$

Both shapes have an area of 12 square units.

Problem 5: Multiply to find area

$$8 \times 3 = 24.$$

The area is **24 square feet**.

Problem 6: Garden in square meters

$$9 \times 5 = 45.$$

The area is **45 square meters**.

Problem 7: Area of a square

A square has equal sides, so $7 \times 7 = 49$.

The area is **49 square inches**.

Problem 8: Labeled rectangle

$$12 \times 4 = 48.$$

The area is **48 square centimeters**.

Problem 9: Missing width

Think: $9 \times ? = 36$. Since $9 \times 4 = 36$, the width is 4 inches.

The width is **4 inches**.

Problem 10: Missing length

Think: $7 \times ? = 56$. Since $7 \times 8 = 56$, the length is 8 feet.

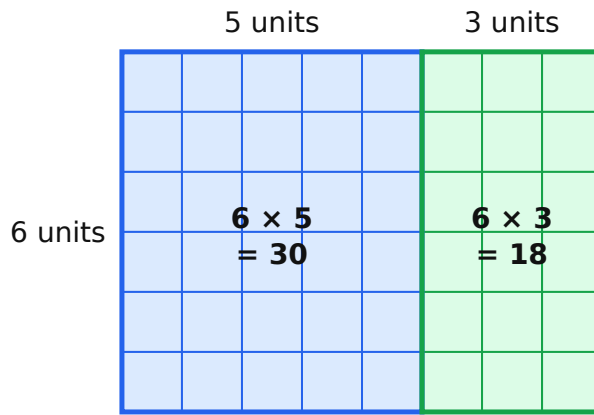
The length is **8 feet**.

Problem 11: Break apart a rectangle

Left part: $6 \times 5 = 30$. Right part: $6 \times 3 = 18$.

Add the parts: $30 + 18 = 48$.

The whole area is **48 square units**. Check: $6 \times 8 = 48$.



$$30 + 18 = 48 \text{ square units.}$$

Problem 12: Break apart a factor

$$7 \times 9 = 7 \times (5 + 4).$$

$$7 \times 5 = 35 \text{ and } 7 \times 4 = 28, \text{ so } 35 + 28 = 63.$$

The product is **63**.

Problem 13: Write the area as a sum

$$5 \times 12 = (5 \times 10) + (5 \times 2).$$

$$50 + 10 = 60.$$

The area is **60 square feet**.

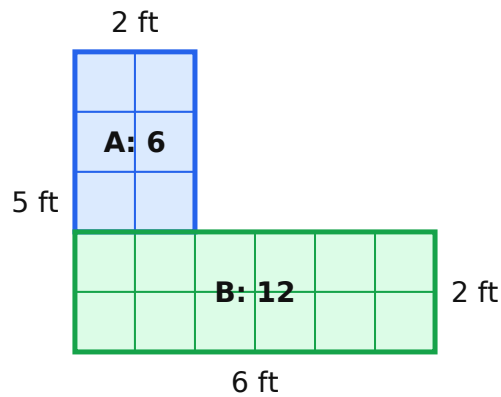
Problem 14: L-shaped room

Split the room into rectangle A (top, 2 ft by 3 ft) and rectangle B (bottom, 6 ft by 2 ft). The top part is $5 - 2 = 3$ ft tall.

$$2 \times 3 = 6 \text{ and } 6 \times 2 = 12.$$

$$6 + 12 = 18.$$

The area is **18 square feet**.



$$6 + 12 = 18 \text{ square feet.}$$

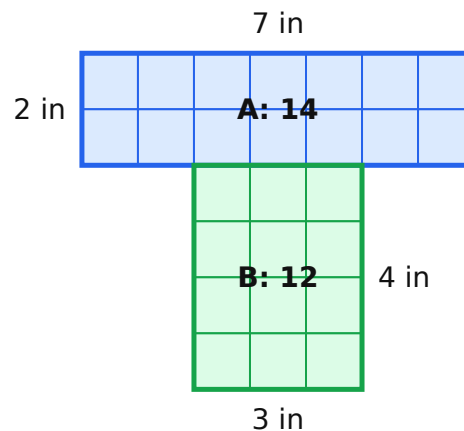
Problem 15: T-shaped sign

Split the sign into the top bar and the stem.

Top bar: $7 \times 2 = 14$. Stem: $3 \times 4 = 12$.

$$14 + 12 = 26.$$

The area is **26 square inches**.



$$14 + 12 = 26 \text{ square inches.}$$

Problem 16: Floor tiles

$$10 \times 8 = 80.$$

She needs **80 tiles**.

Problem 17: Store and closet

Main room: $8 \times 6 = 48$. Closet: $4 \times 3 = 12$.

$$48 + 12 = 60.$$

The total floor area is **60 square feet**.

Problem 18: Whose rug is bigger?

Priya: $6 \times 4 = 24$ sq ft. Diego: $5 \times 5 = 25$ sq ft.

Compare: $25 > 24$. The difference is $25 - 24 = 1$.

Diego's rug covers 1 square foot more.

Problem 19: Backyard in two parts

Adding: $9 \times 6 = 54$ and $4 \times 6 = 24$, so $54 + 24 = 78$.

One big rectangle: the width is $9 + 4 = 13$ feet, so $6 \times 13 = 78$.

Both ways give **78 square feet**.

Problem 20: Store sign

First rectangle: $10 \times 4 = 40$. Second rectangle: $6 \times 3 = 18$.

$$40 + 18 = 58.$$

The total area is **58 square inches**.

Problem 21: Find the mistake

Noah added the side lengths: $7 + 6 = 13$. Area is the number of unit squares that cover the rectangle, so he should multiply.

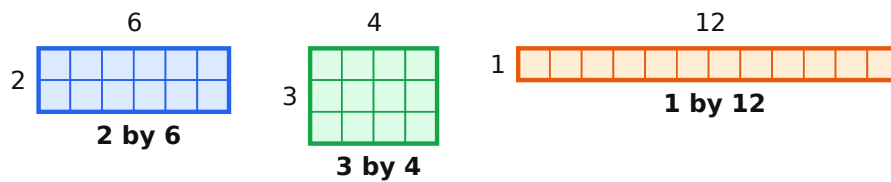
$$7 \times 6 = 42.$$

The correct area is **42 square units**.

Problem 22: Same area, different rectangles

Find the pairs of whole numbers that multiply to 12: 1×12 , 2×6 , 3×4 .

There are 3 rectangles: 1 by 12, 2 by 6 and 3 by 4.



All three rectangles cover 12 square units.