Area by Multiplying Side Lengths

Apply the skill to decisions and designs

Name _____ **Date** _____ **Score** _____ / 6

QUICK REVIEW

For a rectangle, multiply length by width to find area. If lengths are measured in centimeters, area is measured in square centimeters. To find a missing side, divide the area by the known side. Adding the four side lengths measures the perimeter, not the area.

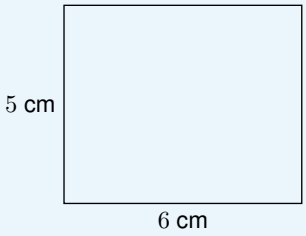
Worked example

Find the area of the rectangle from its side lengths. Include square units.

1. Each 1-cm-wide row contains 6 square centimeters, and there are 5 rows.

2. Area $= 6 \times 5 = 30$ cm^2.

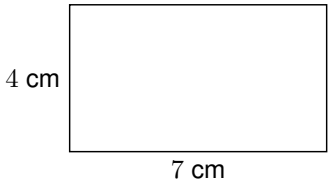
Answer: 30 cm^2.



Practice Problems

Show your thinking.

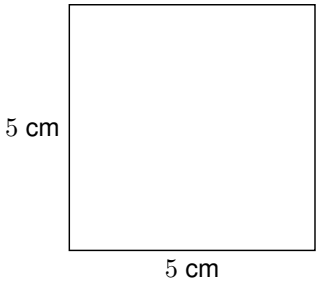
1. A poster needs at least 27 cm^2 of space. Does this rectangle provide enough? Find the extra area.



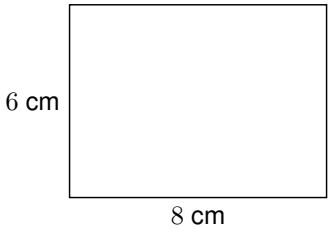
2. The rectangle becomes 2 cm longer but keeps the same height. Find its new area and the increase.



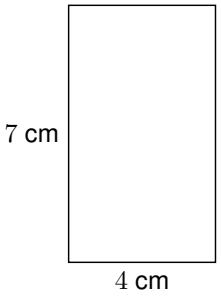
3. Design another rectangle with area 25 cm^2. Its height must be 1 cm. Find its length.



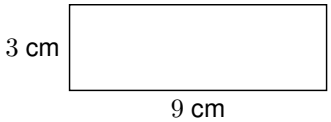
4. A poster needs at least 47 cm^2 of space. Does this rectangle provide enough? Find the extra area.



5. The rectangle becomes 2 cm longer but keeps the same height. Find its new area and the increase.



6. Compare a 9-cm-by-3-cm rectangle with a 8-cm-by-4-cm rectangle. Which has more area?



Answer Key

1. Yes; 1 cm^2 extra.
2. New area 24 cm^2; increase 6 cm^2.
3. Length 25 cm.
4. Yes; 1 cm^2 extra.
5. New area 42 cm^2; increase 14 cm^2.
6. Areas 27 cm^2 and 32 cm^2; second larger.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. The rectangle provides $7 \times 4 = 28$ cm^2.
2. $28 - 27 = 1$ cm^2 extra, so the area requirement is met.

Problem 2

1. New length: $6 + 2 = 8$ cm, so new area is $8 \times 3 = 24$ cm^2.
2. The old area was $6 \times 3 = 18$; the increase is $24 - 18 = 6$ cm^2.

Problem 3

1. The original area is $5 \times 5 = 25$ cm^2.
2. The new length solves $1 \times \square = 25$, so use 25 cm. Check $1 \times 25 = 25$.

Problem 4

1. The rectangle provides $8 \times 6 = 48$ cm^2.
2. $48 - 47 = 1$ cm^2 extra, so the area requirement is met.

Problem 5

1. New length: $4 + 2 = 6$ cm, so new area is $6 \times 7 = 42$ cm^2.
2. The old area was $4 \times 7 = 28$; the increase is $42 - 28 = 14$ cm^2.

Problem 6

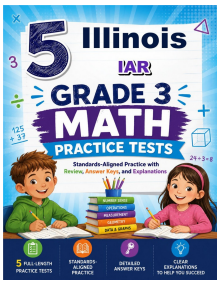
1. First area: $9 \times 3 = 27$ cm^2.
2. Second area: $8 \times 4 = 32$ cm^2. Compare 27 and 32, not just a single side.

TESTINAR

Keep Building Grade 3 Math Skills

Choose the practice book matched to your state assessment and turn worksheet practice into a complete test-prep plan.

All Grade 3 books



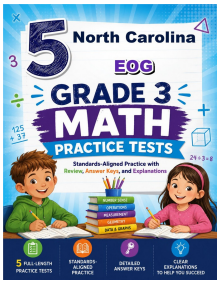
ILLINOIS IAR

5 Full-Length Math Practice Tests

Build Grade 3 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook



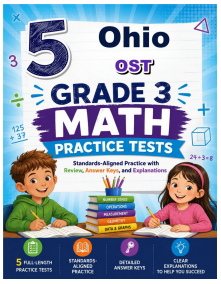
NORTH CAROLINA EOG

5 Full-Length Math Practice Tests

Build Grade 3 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook



OHIO OST

5 Full-Length Math Practice Tests

Build Grade 3 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 3 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/3