Area of Parallelograms and Trapezoids

Parallelogram and trapezoid area: Mistakes and missing information

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

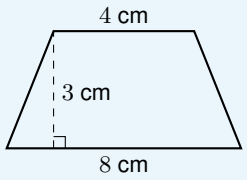
QUICK REVIEW

A parallelogram has $A = bh$, using perpendicular height: $b = 7, h = 4$ gives 28 cm^2. A trapezoid has $A = \frac{1}{2}(b_1 + b_2)h$: bases $4, 8$ and height 3 give $(4 + 8) \times 3/2 = 18$ cm^2. Slanted sides are not heights. Sketches are not to scale.

Worked example

Find the trapezoid area.

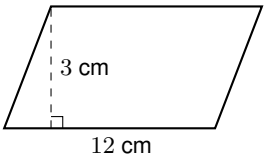
1. Average the parallel bases: $(4 + 8)/2 = 6$ cm.
2. Multiply by perpendicular height: $6 \times 3 = 18$ cm^2.
Answer: 18 cm^2.



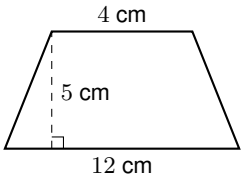
Practice Problems

Show your thinking.

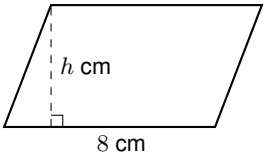
1. A student adds base and height for area. Correct it.



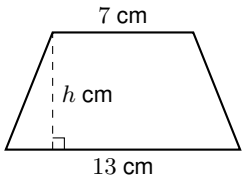
2. A student forgets to divide the base sum by 2. Correct the area.



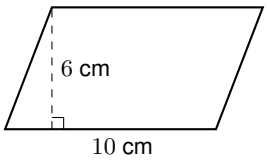
3. Recover the height. Area is 56 cm^2; find h.



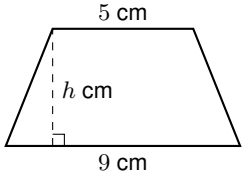
4. Recover the trapezoid height. Area is 40 cm^2; find h.



5. Explain why a 10-cm base and 6-cm perpendicular height give this area.



6. Design the perpendicular height for the stated area. Area is 56 cm^2; find h.



Answer Key

1. 36 cm^2.
2. 40 cm^2.
3. 7 cm.
4. 4 cm.
5. 60 cm^2.
6. 8 cm.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. Rearrange the slanted side pieces into a rectangle with base 12 cm and height 3 cm.
2. $A = 12 \times 3 = 36$ cm^2.

Problem 2

1. Average the parallel bases: $(4 + 12)/2 = 8$ cm.
2. Multiply by perpendicular height: $8 \times 5 = 40$ cm^2.

Problem 3

1. The perpendicular base is 8 cm.
2. Area is $8h$, so $8h = 56$.
3. $h = 56/8 = 7$ cm; check $8 \times 7 = 56$.

Problem 4

1. Average the given parallel bases: $(7 + 13)/2 = 10$ cm.
2. Area is $10h$, so $10h = 40$.
3. $h = 40/10 = 4$ cm; check $10 \times 4 = 40$.

Problem 5

1. Rearrange the slanted side pieces into a rectangle with base 10 cm and height 6 cm.
2. $A = 10 \times 6 = 60$ cm^2.

Problem 6

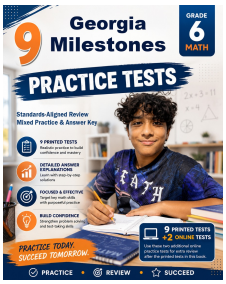
1. Average the given parallel bases: $(5 + 9)/2 = 7$ cm.
2. Area is $7h$, so $7h = 56$.
3. $h = 56/7 = 8$ cm; check $7 \times 8 = 56$.

TESTINAR

Keep Building Grade 6 Math Skills

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

All Grade 6 books



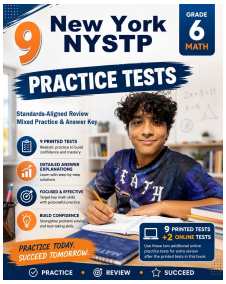
GEORGIA MILESTONES

9 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook



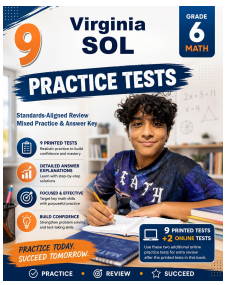
NEW YORK NYSTP

9 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook



VIRGINIA SOL

9 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 6 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/6