

7th Grade Lesson 75

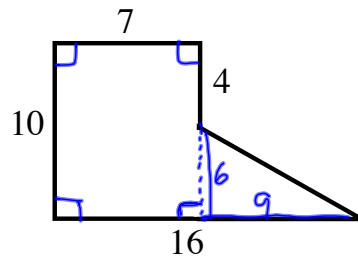
- I can find the areas of complex figures that include rectangular and triangular regions.
- I can find the area of a trapezoid.

Find the area of this figure. Corners that look square are square.
Dimensions are in millimeters.

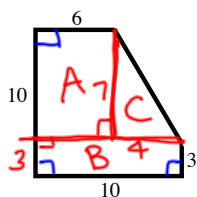
Rectangle
 $A = 7 \cdot 10 = 70 \text{ mm}^2$

Triangle
 $A = \frac{9 \cdot 6}{2} = 27 \text{ mm}^2$

Total Area = $70 + 27 = 97 \text{ mm}^2$



Find the area of this figure. Corners that look square are square. Dimensions are in centimeters.

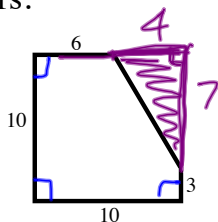


"A"
 $A = 6 \cdot 6 = 36 \text{ cm}^2$

"B"
 $A = 10 \cdot 3 = 30 \text{ cm}^2$

"C"
 $A = \frac{4 \cdot 7}{2} = 14 \text{ cm}^2$

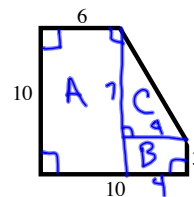
Total = $36 + 30 + 14 = 80 \text{ cm}^2$



square
 $A = 10 \cdot 10 = 100 \text{ cm}^2$

triangle
 $A = \frac{4 \cdot 7}{2} = 14 \text{ cm}^2$

Total = $100 - 14 = 86 \text{ cm}^2$



"A"
 $A = 6 \cdot 6 = 36 \text{ cm}^2$

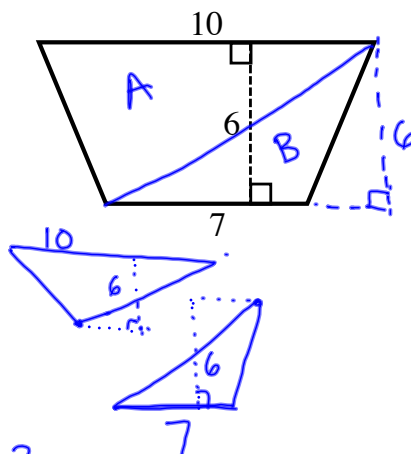
"B"
 $A = 4 \cdot 3 = 12 \text{ cm}^2$

"C"
 $A = \frac{7 \cdot 3}{2} = 10.5 \text{ cm}^2$

Total = $36 + 12 + 10.5 = 58.5 \text{ cm}^2$

A quadrilateral with just one pair of parallel sides is a trapezoid. One way to find the area of a trapezoid is to divide the trapezoid into two triangular regions and find the combined area of the triangles.

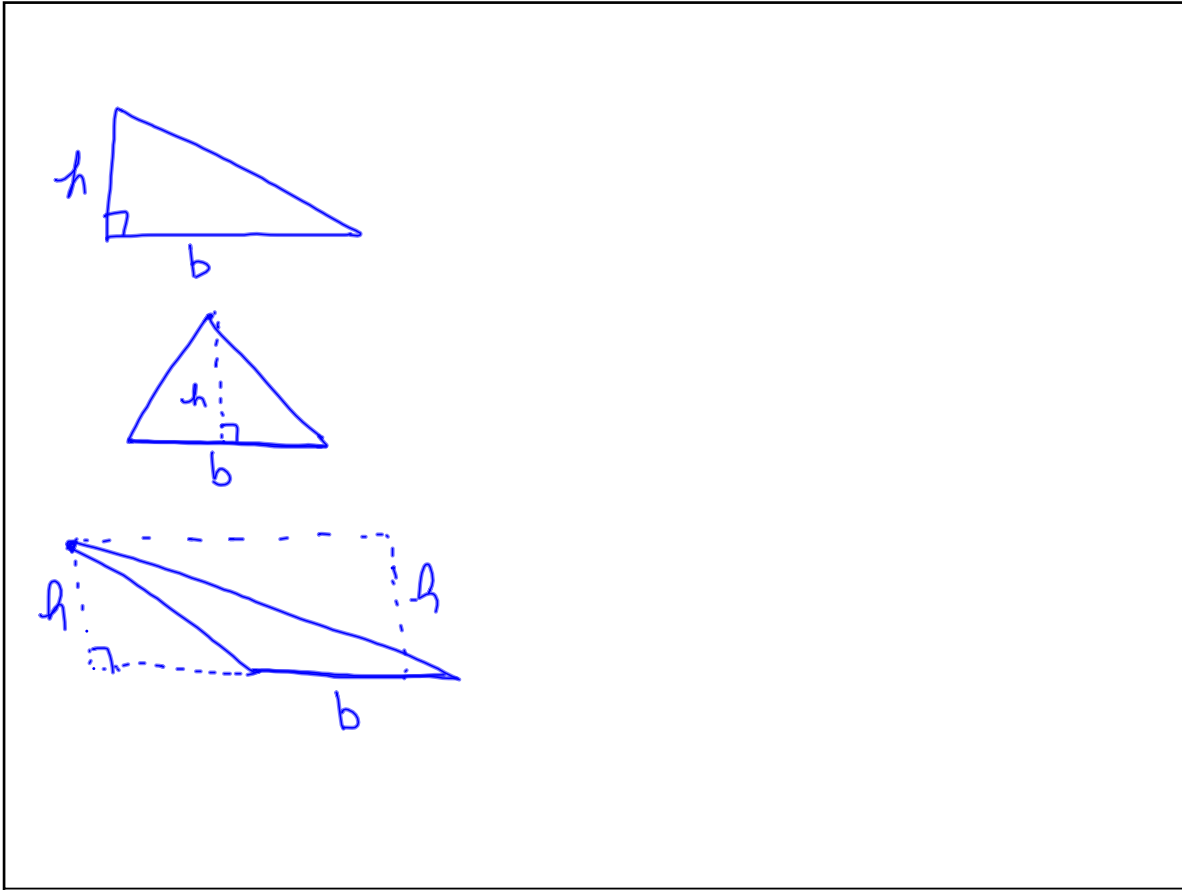
Find the area of this trapezoid. Dimensions are in centimeters.



"A"
 $A = \frac{10 \cdot 6}{2} = 30 \text{ cm}^2$

"B"
 $A = \frac{7 \cdot 6}{2} = 21 \text{ cm}^2$

Total Area = $30 + 21 = 51 \text{ cm}^2$



Assignment

Problem Set 75

***A/B Optional: #1-5, 9-10, 14-17, 23, 27-29**

Test #14 on Thursday; Assignment due Friday

Corrections on PS 68 and PS 69 due Thursday