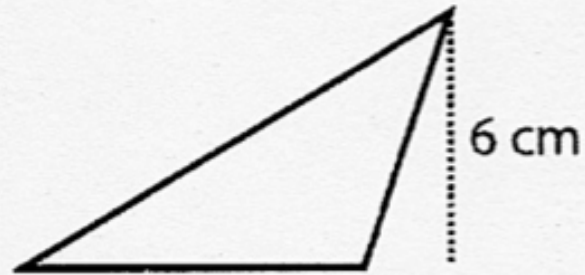


Do Now

The area of the triangle is 24 cm^2 .



What is the base's length?

Do Now

The base of the triangle is twice its height.



Area = 25 in^2

What is the height?

Trapezoid Area

Take one piece of graph paper. Fold it in half (hot dog fold).

On the top left half of the paper draw a trapezoid (vertices aligned with intersections on the paper).

Mark the dimensions (base 1, base 2, and height) of this trapezoid.

On the bottom half, draw a congruent trapezoid.

Cut out the bottom trapezoid. Cut one along the height and rearrange the pieces to form a rectangle with the top trapezoid.

What is the area of the rectangle in terms of base1, base2, and height?

How does the area of the trapezoid compare to the area of the rectangle?

NOTES

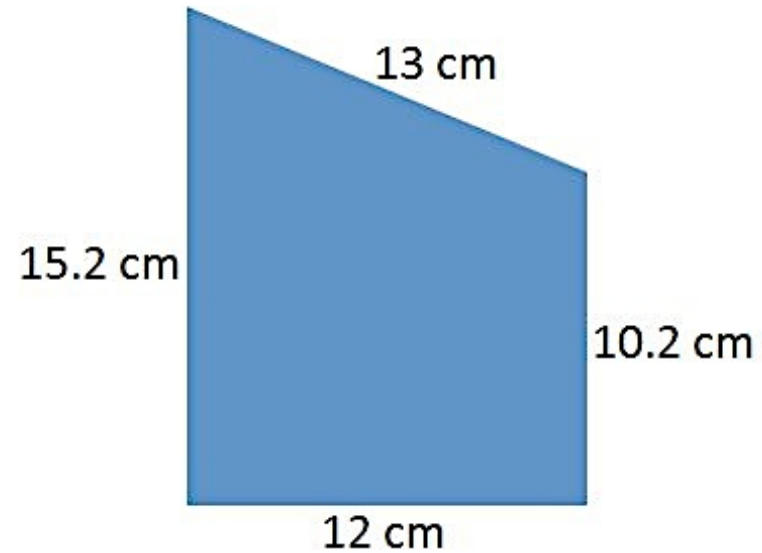
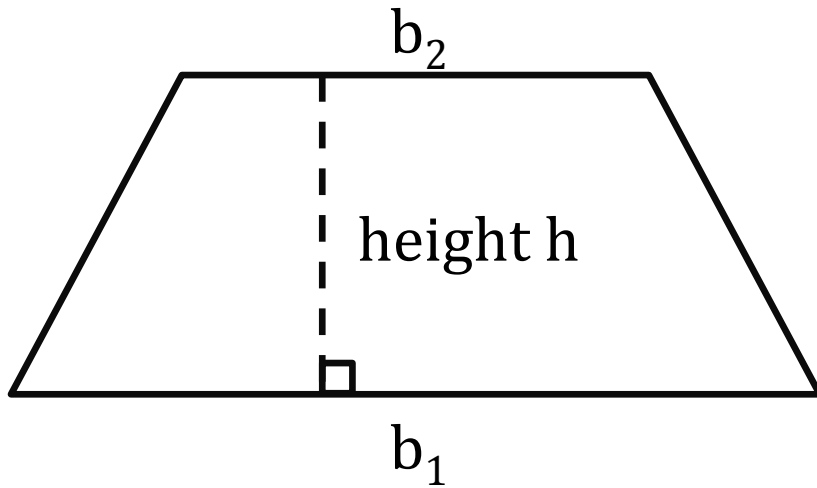
The picture below illustrates the trapezoid formula derivation we performed in class. By placing two congruent trapezoids as shown we can form a parallelogram. Using the formula $A=bh$ for a parallelogram, results in $A = (b_1+b_2)h$. Since the area of each trapezoid is exactly $\frac{1}{2}$ of the area of the parallelogram, the formula for area of a trapezoid is $\frac{1}{2}(b_1+b_2)h$.



Explain this statement:

A triangle is a trapezoid with one infinitely small base.

Area of a Trapezoid: $A = \frac{1}{2}(b_1 + b_2)h$



It is important to remember that the bases are the parallel sides of the trapezoid, because trapezoids are not always pictured with their bases oriented horizontally (see the blue trapezoid above).

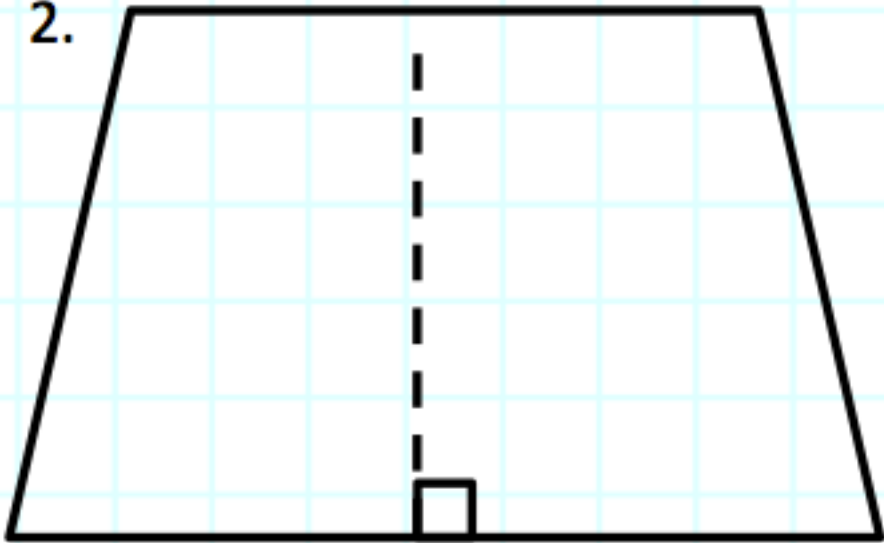
Measure each trapezoid in centimeters (round to the nearest half-centimeter). Then, calculate the area of each trapezoid.

1.



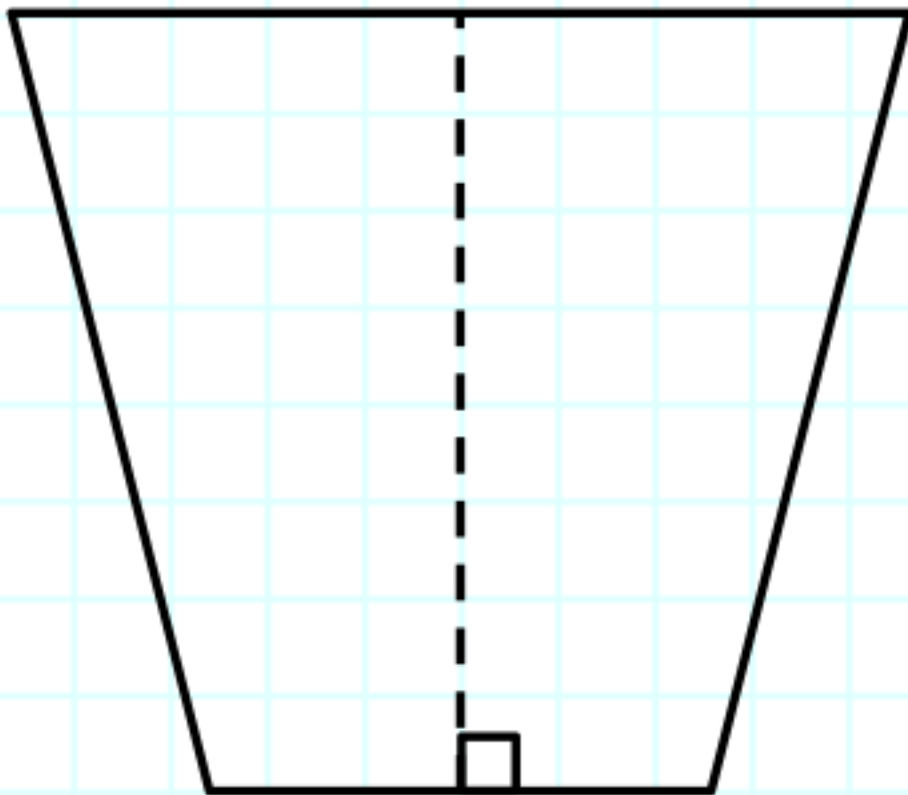
Measure each trapezoid in centimeters (round to the nearest half-centimeter). Then, calculate the area of each trapezoid.

2.



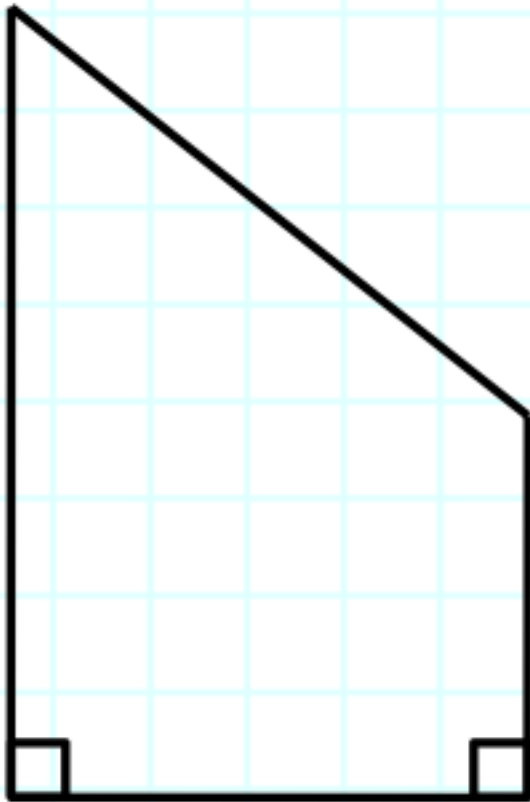
Measure each trapezoid in centimeters (round to the nearest half-centimeter). Then, calculate the area of each trapezoid.

3.

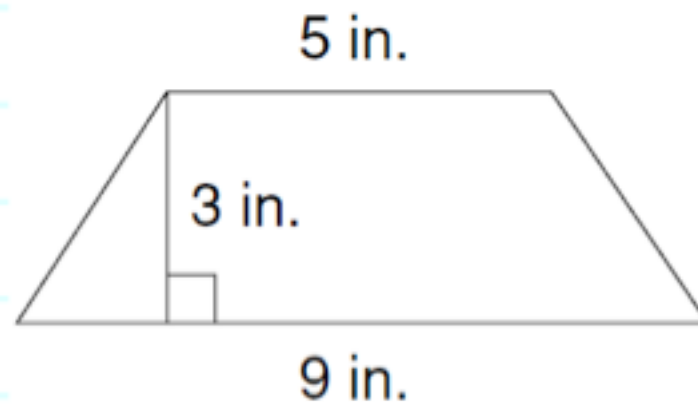


Measure each trapezoid in centimeters (round to the nearest half-centimeter). Then, calculate the area of each trapezoid.

4.



Find the area of this trapezoid:



Find the area of this trapezoid:

