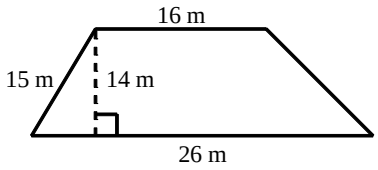
NAME:_____

P.I. G.G.40: Investigate, justify, and apply theorems about trapezoids (including isosceles trapezoids) involving their angles, sides, medians, and diagonals

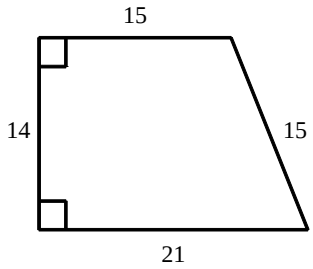
1. Find the area of the trapezoid.



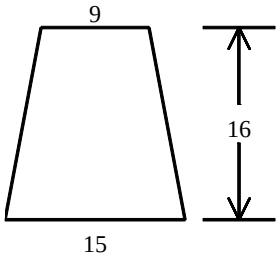
[A] 588 m^2 [B] 294 m^2

[C] 630 m^2 [D] 315 m^2

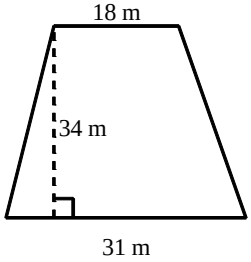
2. Find the area of the trapezoid. Dimensions are in inches.



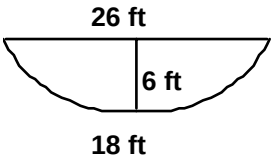
3. Find the area of the trapezoid. Dimensions are in meters.



4. Calculate the area of the trapezoid.



5. To study stream flow, a hydrologist needs to find the area of a cross section of a stream. The cross section resembles a trapezoid. Estimate the area of the cross section shown here.



6. The area of a trapezoid is 170 in^2. If the height is 10 in. and the longer base is 31 in., what is the length of the shorter base? Round your answer to the nearest tenth.

[A] 3.0 in. [B] 5.5 in.

[C] 17.0 in. [D] 14.0 in.

7. The area of an isosceles trapezoid is 274 $in.^2$. Its height is 8 in. and the length of its shorter base is 16 in. Find the length of its legs to the nearest tenth.

8. A florist makes a box for small orchids that is 15 cm by 15 cm by 15 cm. On one base, the box has three trapezoidal flaps. The flaps have longer bases that are 15 cm, shorter bases that are 13 cm, and are 2 cm high. How many square centimeters are used for each box?

9. Graph the lines $y = 2$, $y = 6$, $x = -1$, and $y = x - 2$. Name the resulting figure and find its area.

[1] B

[2] 252 square inches

[3] 192 m^2

[4] 833 m^2

[5] 132 ft^2

[6] A

[7] 19.9 in.

[8] 1434 cm^2

[9] trapezoid; 28 sq units