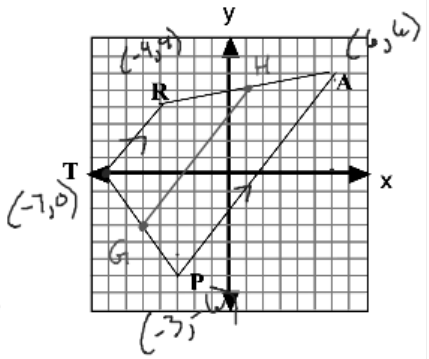
Show all work
Find the midpoint of the non-parallel sides
Label the midpoints G (-5, -3) & H (1, 5)
Draw the midsegment
Use the distance formula to prove the midsegment theorem
TR = _____ GH = _____ PA = _____



Prove ll Lines

Slope $\overline{TR}$ $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4-0}{-4-(-7)} = \frac{4}{3}$

Slope $\overline{PA}$ $\frac{6-(-6)}{6-(-3)} = \frac{12}{9} = \frac{4}{3}$

midpoint $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

midpt $\overline{TP}$ $\left(\frac{-7+(-3)}{2}, \frac{0+(-4)}{2}\right)$ $(-5,-3)$

midpt $\overline{RA}$ $\left(\frac{6+(-4)}{2}, \frac{6+4}{2}\right)$ $(1,5)$

Distance $= \sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

TR

$TR = \sqrt{(4-0)^2+(-4-(-7))^2}$

$= \sqrt{4^2+3^2}$

$= \sqrt{16+9}$

$= \sqrt{25} = 5$

GH

$GH = \sqrt{(-5-1)^2+(-3-5)^2}$

$= \sqrt{(-6)^2+(-8)^2}$

$= \sqrt{36+64}$

$= \sqrt{100}$

$= 10$

PA

$PA = \sqrt{(6-(-3))^2+($

$= \sqrt{9^2+12^2}$

$= \sqrt{81+144}$

$= \sqrt{225}$

$= 15$

$\frac{5+15}{2} \stackrel{?}{=} 10$

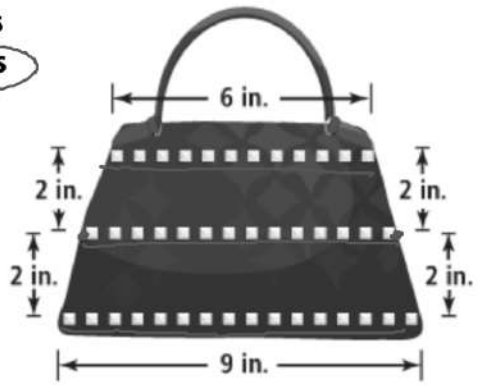
$10 = 10$

Given Trapezoid ABCD with points A (-2, -3), B(-4, 1), C(-2, 4), and D(4,6).

Graph the figure
Prove which two sides are parallel Slope
Find the midpoint of the non parallel sides and lable the midpoints X and Y midpt
Draw the midsegment
Use the distance fromula to prove the midsegment theorem. Distance

BC = _____ AD = _____ XY = _____

Paxton makes trapezoidal handbags for her friends. She stitches decorative trim along the top, middle, and bottom on both sides of the handbags. How much trim does she need for three handbags? Explain.



SOLUTION

$$\text{mid seg} = \frac{b_1 + b_2}{2}$$

$$\frac{6+9}{2} = 7.5 \text{ in}$$

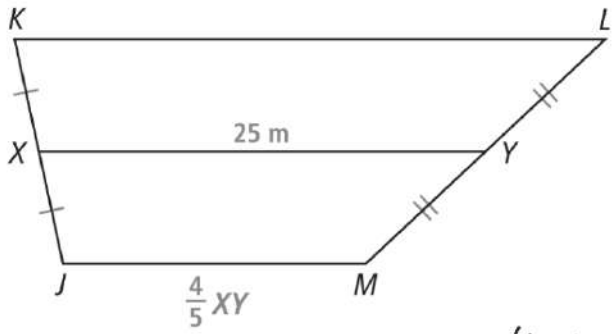
$12+15+18$

45

135 in

5. Given trapezoid *JKLM*, what is *KL*?

Enter your answer.



20

$JM = \frac{4}{5}(XY)$

$= \frac{4}{5}(25)$

$XY = \frac{JM + KL}{2}$

$25 = \frac{20 + KL}{2}$

$50 = 20 + KL$

$KL = 30$