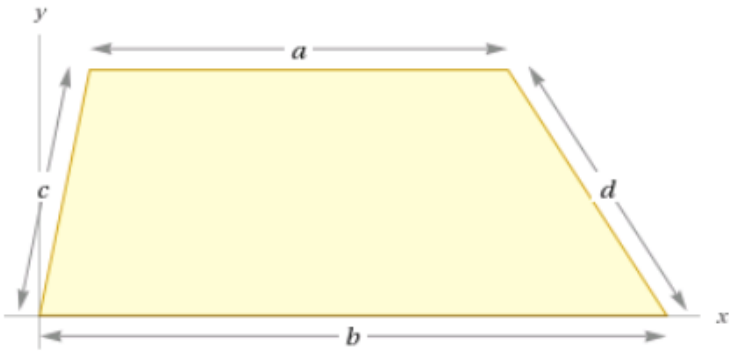
Answer on Question #49550 – Math – Geometry

Area of a trapezium is 16 sq cm.Length of one parallel side is 5 cm and distance between two parallel sides is 4 cm.Find the length of the other parallel side.Try to draw this trapezium on a graph paper and check the area.

Solution:

$A = 16\ cm^2 - area\ of\ a\ trapezium;$
$a = 5\ cm - length\ of\ one\ parallel\ side;$
$b - length\ of\ the\ other\ parallel\ side;$
$h = 4\ cm - distance\ between\ two\ parallel\ sides;$



The area of a trapezium is given by the formula:

$$A = \frac{(a+b)}{2}h,$$

hence

$$2A = ah + bh$$

$$b = \frac{2A - ah}{h} = \frac{2A}{h} - a = \frac{2 \cdot 16\ cm^2}{4\ cm} - 5\ cm = 3\text{cm}$$

Answer: length of the other parallel side is equal to $3cm$.