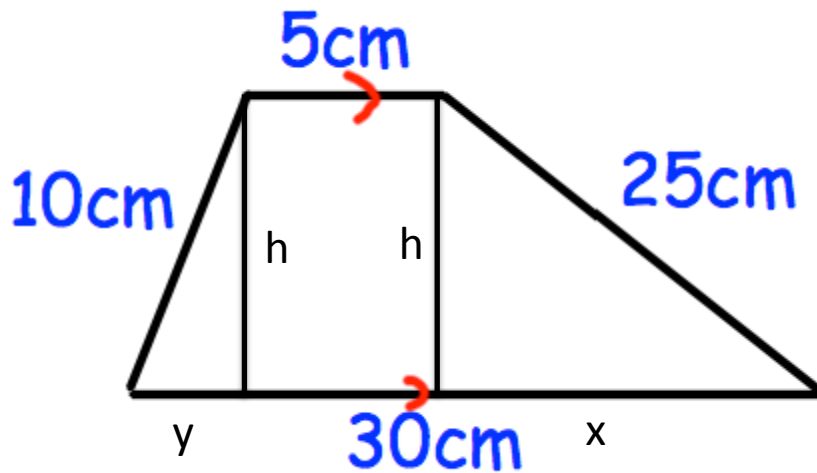


December 5th



$$x + y = 25$$

Using pythagoras

$$h^2 = 100 - y^2 \quad \text{and}$$

$$h^2 = 625 - x^2$$

Subtracting gives

$$525 - x^2 + y^2 = 0 \quad \text{hence} \quad x^2 - y^2 = 525$$

Therefore

$$(x + y)(x - y) = 525$$

And since

$$x + y = 25 \quad \text{then} \quad x - y = 525 \div 25 = 21$$

Solving gives

$$x = 23, y = 2$$

These give a value of $h = \sqrt{96}$

$$\text{Area} = \frac{1}{2} (5 + 30) \times \sqrt{96}$$

$$= 70\sqrt{6} \text{ cm}^2$$