Find the base of an isosceles triangle whose equal sides are 17 cm each and the area is equal to 120 sq cm.

$\triangle ABD$

$17^2 = x^2 + h^2$

$$\text{Area} = \frac{1}{2} \times 2x \times h$$

$$= x \times h$$

$$= x \times \sqrt{17^2 - x^2} = 120 \, cm^2$$
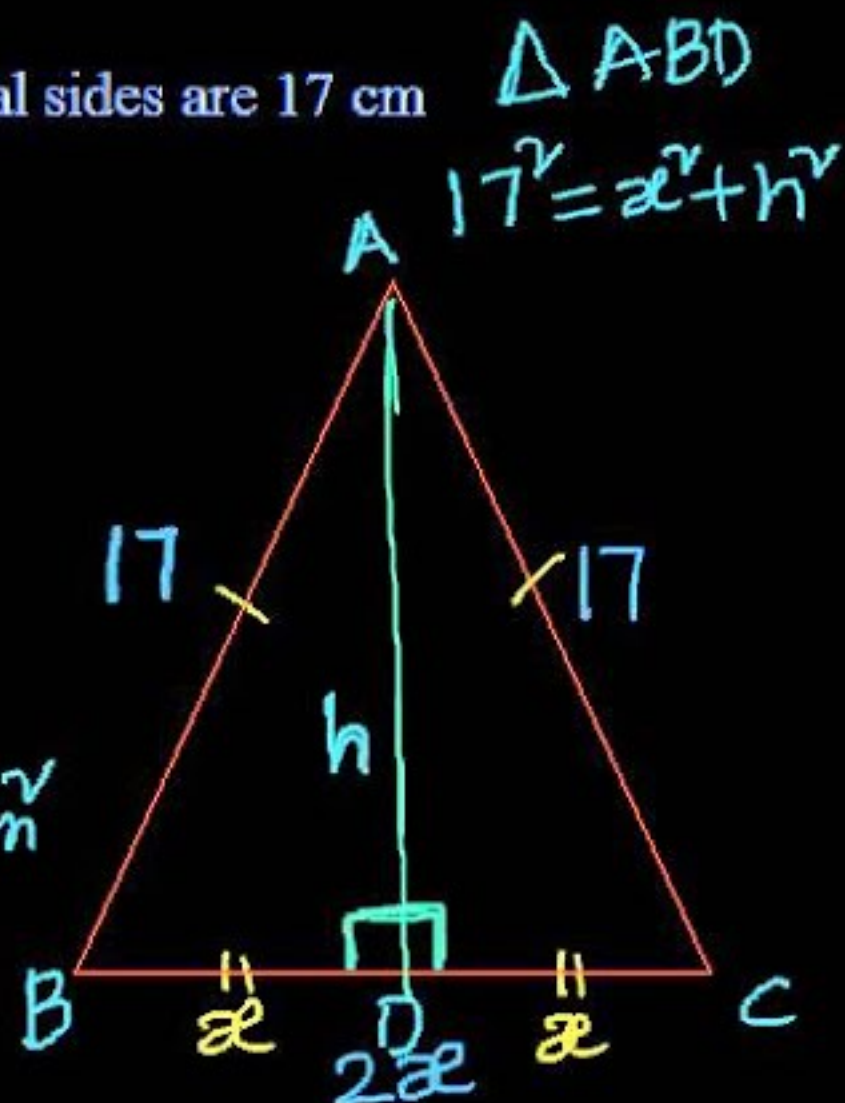
$$x^2(17^2 - x^2) = 120 \times 120$$

Let $x^2 = t$

$$t(289 - t) = 14400$$

$$t^2 - 289t + 14400 = 0$$

$$t^2 - 225t - 64t + 14,4$$

$$\text{Area} = \frac{1}{2} \times b \times h$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

$$s = \frac{a+b+c}{2}$$