

$$\tan(33^\circ) = \frac{h}{100 + x} \quad (1)$$

$$\tan(45^\circ) = \frac{h}{x} \quad (2)$$

Despejando de la ecuación (2) la incógnita x queda

$$x = \frac{h}{\tan(45^\circ)}$$

Remplazando la ecuación anterior en la ecuación (1) nos queda

$$\tan(33^\circ) = \frac{h}{100 + \frac{h}{\tan(45^\circ)}}$$

$$\frac{100 + h}{\tan(45^\circ)} =$$

$$\frac{100 + h}{1 \cdot \tan(45^\circ)} =$$

$$1 + \frac{1}{2}$$

$$\frac{100 \cdot \tan(45^\circ) + h}{\tan(45^\circ)} =$$

$$\frac{1}{1} + \frac{1}{2} = \frac{3}{2}$$

$$100 + h$$

$$\tan(33^\circ) = \frac{h}{100 + \frac{h}{\tan(45^\circ)}}$$

$$0,64 = \frac{h}{100 + h}$$

$$(100 + h) \cdot (0,64) = h$$

$$(100) \cdot (0,64) + 0,64h = h$$

$$64 + 0,64h = h$$

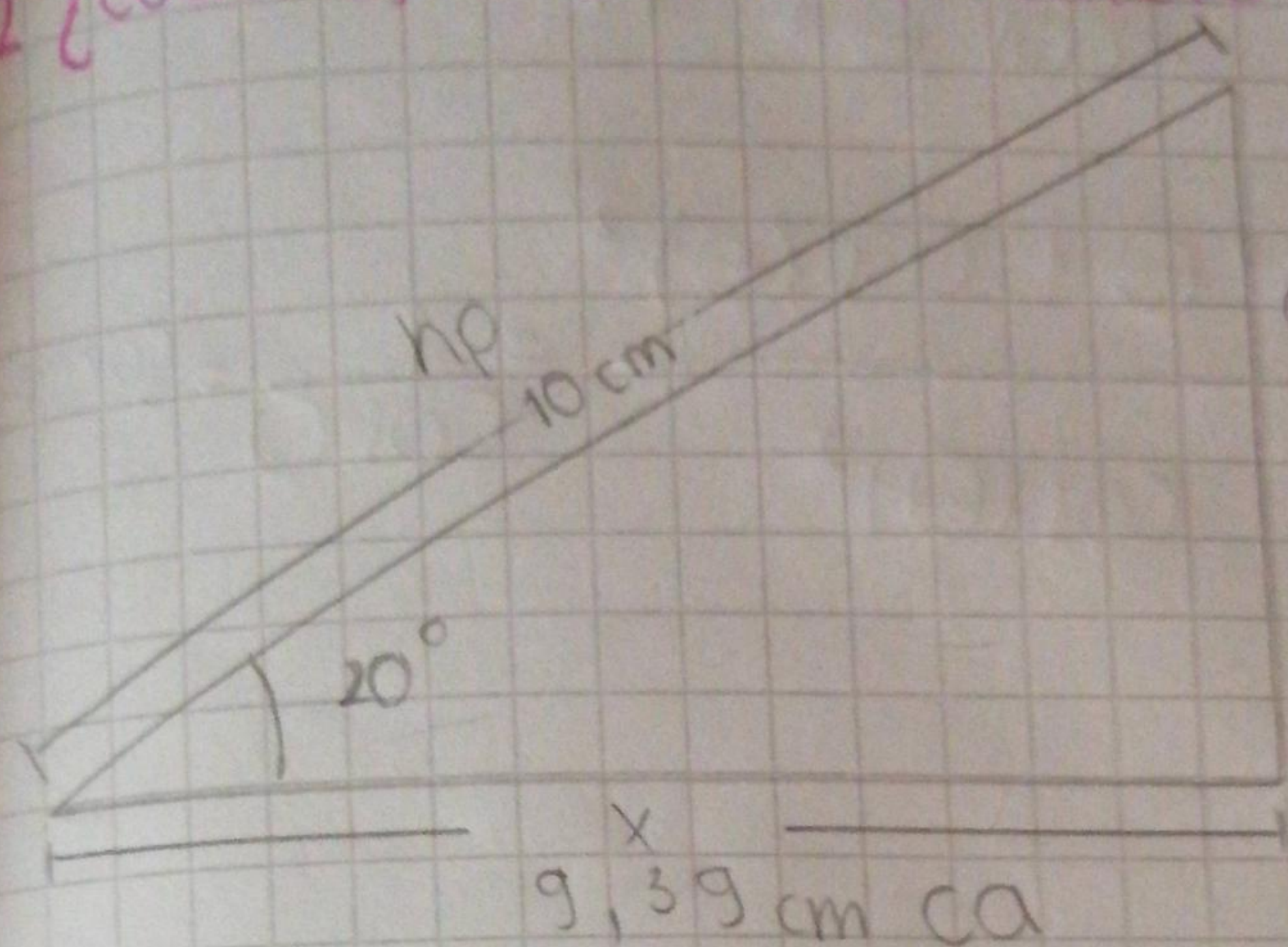
$$64 = h - 0,64h$$

$$64 = 0,36h$$

$$\frac{64}{0,36} = h$$

$$178 \text{ m} = h$$

2 ¿cual es el valor del cateto adyacente?



$$\cos(20) = \frac{ca}{hp}$$

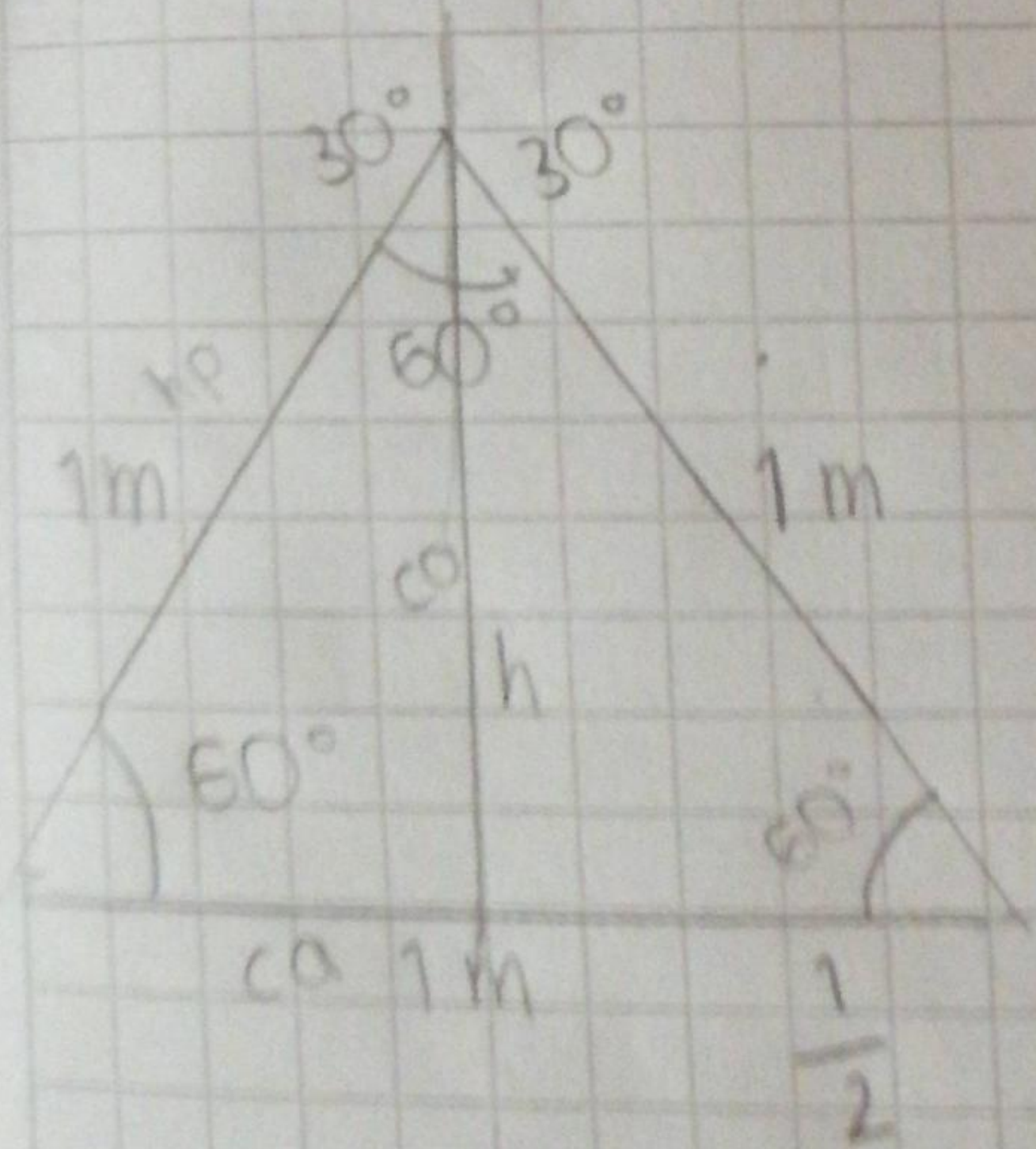
$$\cos(20) = \frac{ca}{10 \text{ cm}}$$

$$ca = 10 \cdot \cos(20)$$

$$ca = 10 \cdot 0,939$$

$$ca = 9,39 \text{ cm}$$

3 Determine el valor de la altura h del triangulo



$$\sin(30) = \frac{h}{1}$$

$$h = \frac{1}{2}$$

Scribe

5

$$1 + \tan^2(\theta) = \tan^2 \frac{\sin \theta^2}{\cos \theta^2} + 1$$

$$\frac{\sin^2(\theta) + \cos(\theta)^2}{\cos^2(\theta)} = \frac{1}{\cos \theta} = \sec(\theta)^2$$

$$4 \frac{ca}{h} \cdot \frac{h}{\cos \theta} + 5 \frac{ca}{ca} a$$

$$\frac{ca}{\cos \theta} = 5 \tan \theta = 5 \cdot 0,41 = 2,0$$