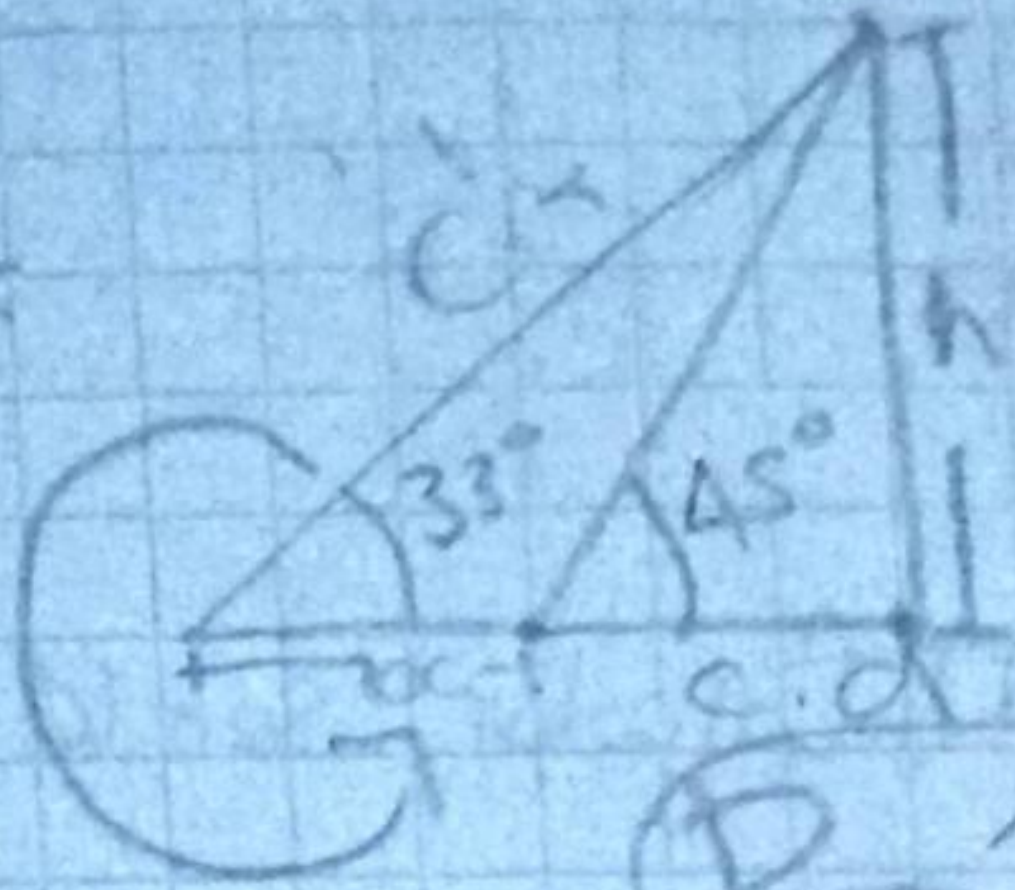


EXAMEN

1) ¿Cuál es el valor de h ?

$$\tan(53) = \frac{h}{100+x}$$

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



$$\frac{100+x}{\tan(45)}$$

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

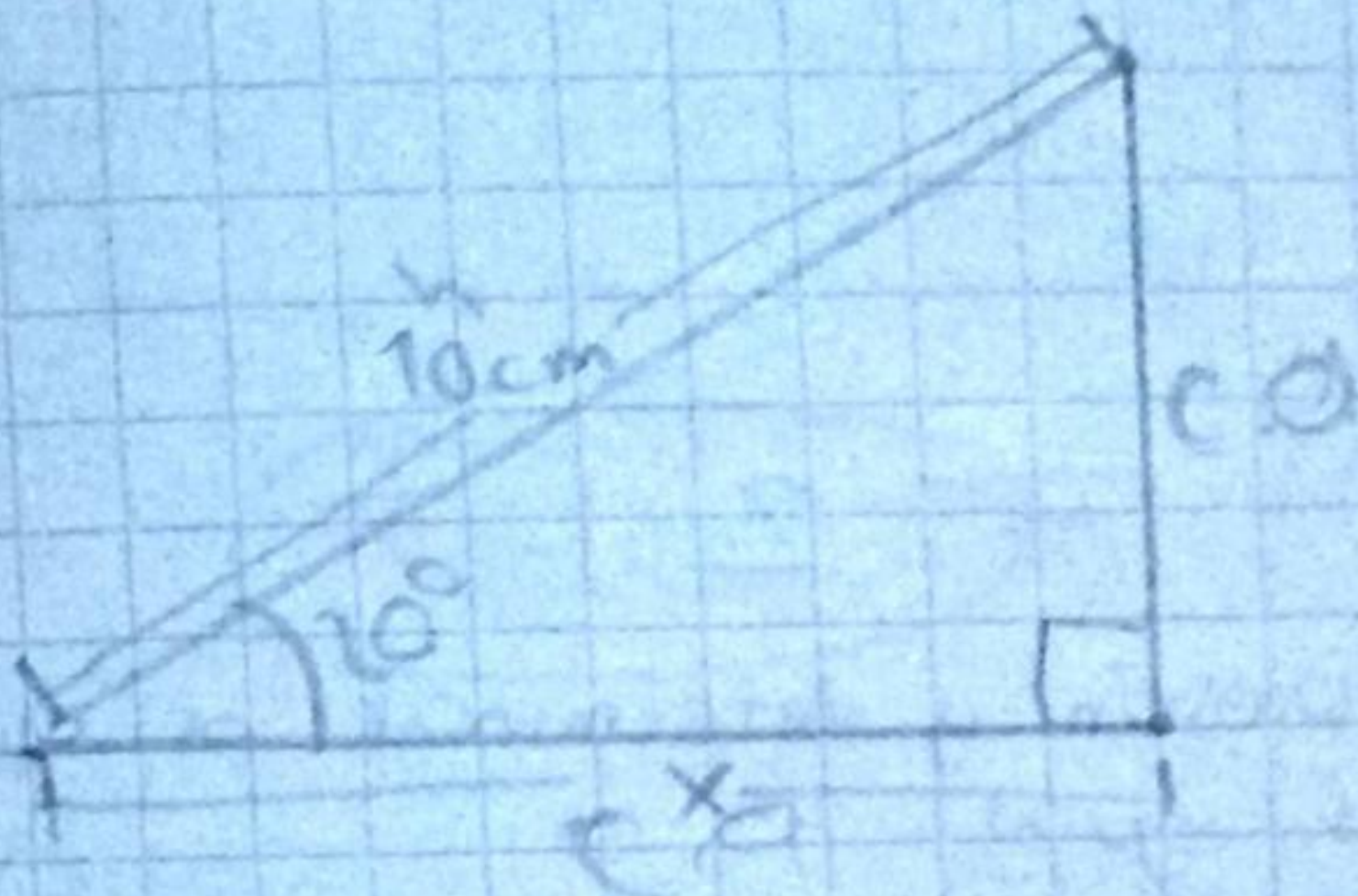
$$h = 100+h$$

$$\tan(53) = \frac{h}{100+x}$$

$$\tan(53)$$

$$R = 185$$

2) ¿Cuál es el valor del cateto adyacente e ?



$$10 \text{ m}$$

$$\theta = 20$$

$$\cos(20) = \frac{c.d.}{10 \text{ m}}$$

$$R = 10 \text{ cm} \cdot \cos(20)$$

$$\cos(20) = 0,9396926$$

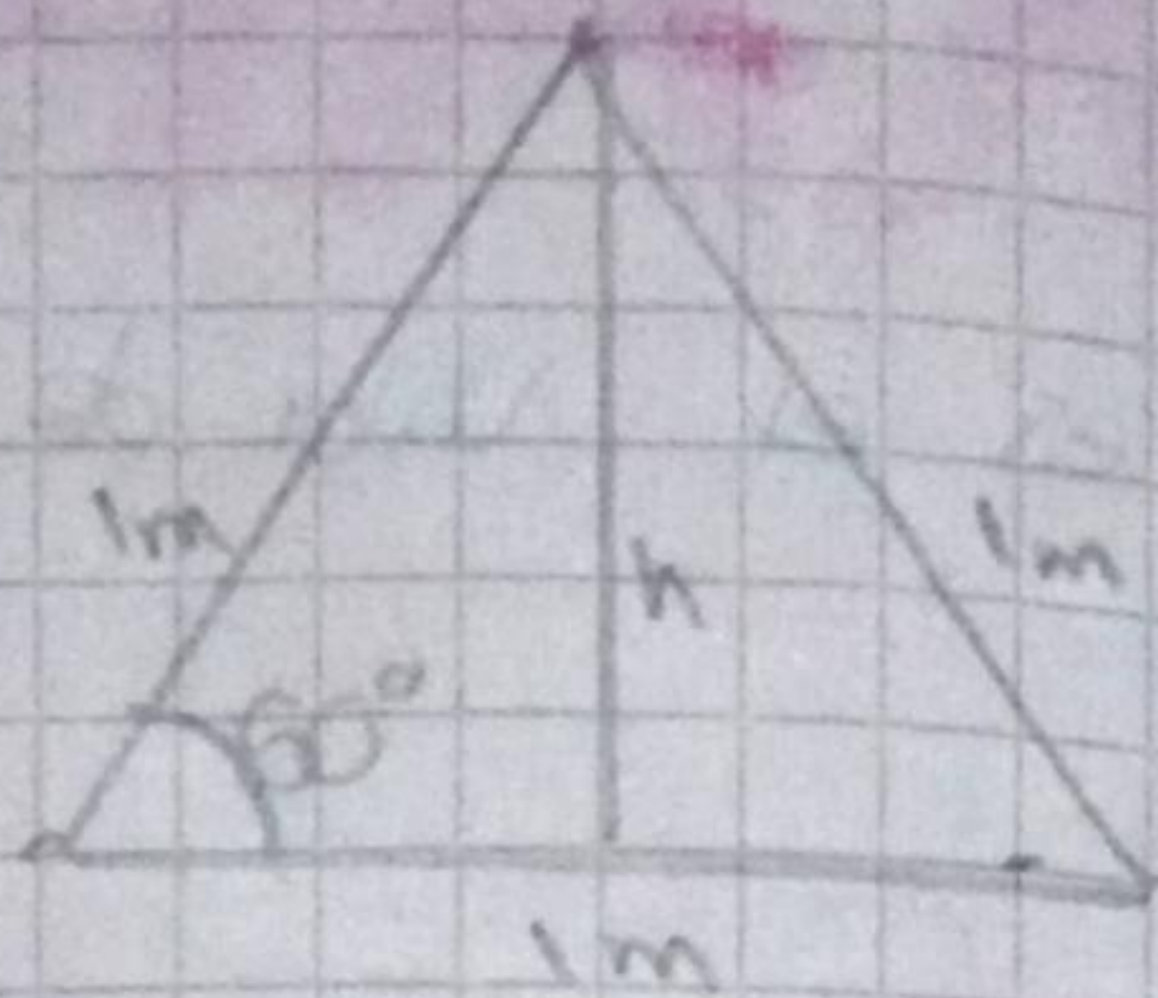
$$= (9,396926 \dots)$$

3 Determine la altura h del triangulo

$$\cos(60^\circ) = \frac{h}{1m}$$

$$h = \cos(60^\circ) = h = 0,5$$

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



4 Si $\sin(\theta) = \frac{1}{3} \sin(\alpha)$, Calcular $\sin(\alpha) - \csc(\theta) + \tan(\theta)$

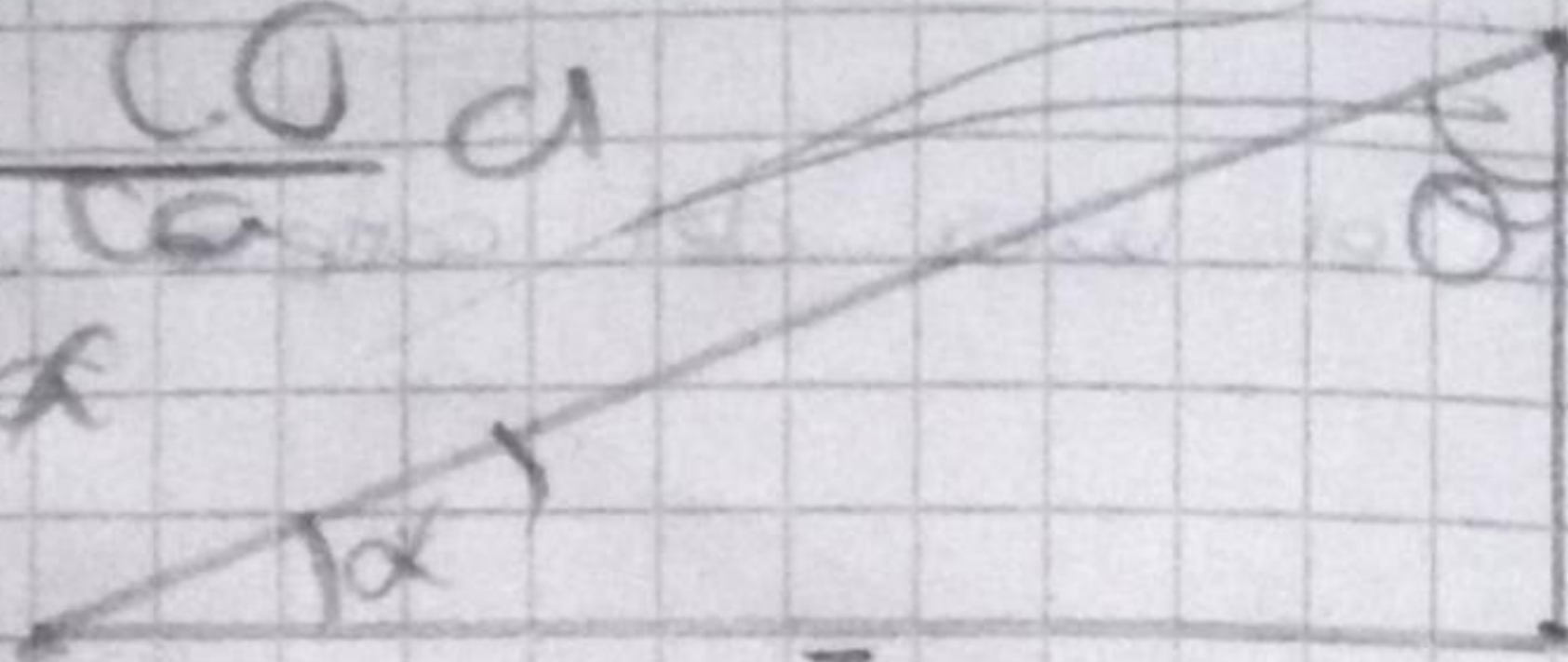
$$\frac{\sin \alpha}{h} = \frac{1}{3} \frac{h}{\cos \alpha} + \frac{\sin \alpha}{\cos \alpha}$$

$$\frac{\sin \alpha}{\cos \alpha} = \frac{1}{3} \frac{\sin \alpha}{\cos \alpha} + \frac{\sin \alpha}{\cos \alpha}$$

$$\frac{\sin \alpha}{\cos \alpha} = 5 \tan \theta$$

$$= 5 = 0,41$$

$$= \frac{3h}{2,07}$$



5 Operar la siguiente expresion y determinar a que función trigonométrica es igual

$$1 + \tan^2(\theta) = ?$$

$$1 + \tan^2(\theta) = ?$$

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

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

$$\frac{1}{\cos^2(\theta)}$$

$$= \sec^2(\theta)$$