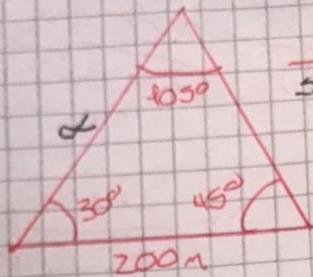


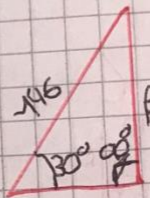
1)



$$\frac{\alpha}{\sin(45^\circ)} = \frac{200}{\sin(105^\circ)}$$

$$\alpha = \frac{200 \times \sin(45^\circ)}{\sin(105^\circ)}$$

$$\alpha = 146$$

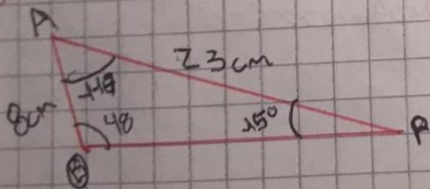


$$\frac{\beta}{\sin(30^\circ)} = \frac{146}{\sin(90^\circ)}$$

$$\beta = \frac{146 \times \sin(30^\circ)}{\sin(90^\circ)}$$

$$\beta = 73,2$$

2)



$$\frac{8}{\sin(150^\circ)} = \frac{23}{\sin(\theta)}$$

$$30,77 = \frac{23}{\sin(\theta)}$$

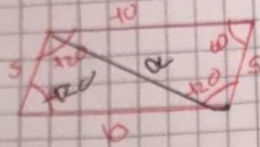
$$\theta = 118$$

$$OP = 8^2 + 23^2 - 2(8)(23) \times \cos(118^\circ)$$

$$OP = \sqrt{760} = 27,6$$

$$\sin \theta = \frac{23}{30,77} = \frac{180 - 48}{118}$$

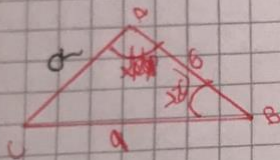
3)



$$\alpha = \sqrt{5^2 + 10^2 - 2(5)(10) \times \cos(120^\circ)} = \sqrt{175}$$

$$\sqrt{175} = 13,22$$

4)

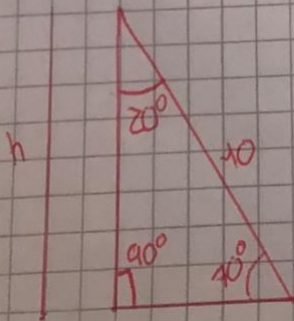


$$\frac{\alpha}{\sin(120^\circ)} = \frac{a}{\sin \theta} \quad \text{des sinus定理}$$

$$\alpha = \sqrt{a^2 + b^2 - 2(a)(b) \times \cos(120^\circ)} = \sqrt{171}$$

$$\sqrt{171} = 13,07$$

5)



$$\frac{h}{\sin 70^\circ} = \frac{10}{\sin 90^\circ}$$

$$h = \frac{10 \times \sin 70^\circ}{\sin 90^\circ} = 9,39$$