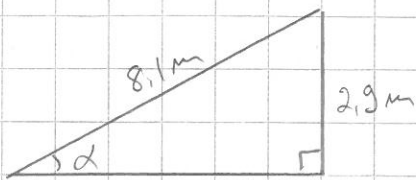
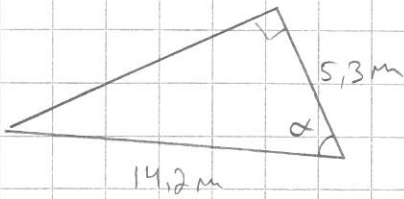


5.3 a)



$$\sin \alpha = \frac{2.9 \text{ m}}{8.1 \text{ m}} \Rightarrow \alpha \approx 20.929^\circ \approx \underline{21.0^\circ}$$

b)



$$\cos \alpha = \frac{5.3 \text{ m}}{14.2 \text{ m}} \Rightarrow \alpha \approx 68.084^\circ \approx \underline{68.1^\circ}$$

6. Similause

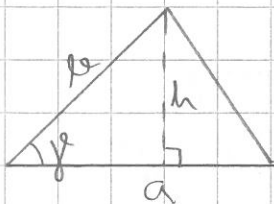
$$\begin{cases} \sin 10^\circ \approx 0.174 \\ \sin 170^\circ \approx 0.174 \end{cases}$$

$$\begin{cases} \sin 57^\circ \approx 0.839 \\ \sin 123^\circ \approx 0.839 \end{cases}$$

Gleisesti

$$\boxed{\sin \alpha = \sin (180^\circ - \alpha)} \quad \text{SININ SYMMETRIALAUSE}$$

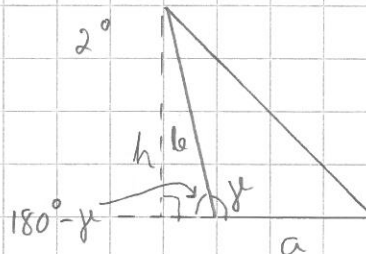
1°



$$\begin{aligned} \sin \gamma &= \frac{h}{b} \quad | \cdot b \\ \Rightarrow h &= b \sin \gamma \end{aligned}$$

$$A = \frac{1}{2} \cdot a \cdot h = \frac{1}{2} a b \sin \gamma$$

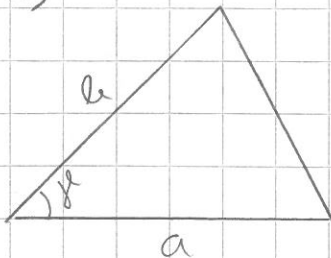
2°



$$\begin{aligned} \sin (180^\circ - \gamma) &= \frac{h}{b} \quad | \cdot b \\ \Rightarrow h &= b \sin (180^\circ - \gamma) \end{aligned}$$

$$\begin{aligned} A &= \frac{1}{2} a h = \frac{1}{2} a b \underbrace{\sin (180^\circ - \gamma)}_{= \sin \gamma} \\ &= \frac{1}{2} a b \sin \gamma \end{aligned}$$

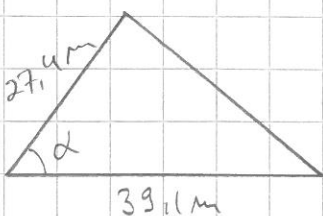
1° ja 2° =>



$$\boxed{A = \frac{1}{2} a b \sin \gamma}$$

KOLMION PINTA-ALAN TRIGONOMETRINEN KAAVA

6.2 b)



$$A = \frac{1}{2} \cdot 27.4 \text{ m} \cdot 39.1 \text{ m} \cdot \sin \alpha = 346 \text{ m}^2 \quad | \cdot \frac{2}{27.4 \text{ m} \cdot 39.1 \text{ m}}$$

$$\Rightarrow \sin \alpha = \frac{2 \cdot 346 \text{ m}^2}{27.4 \text{ m} \cdot 39.1 \text{ m}} \approx 0.64592$$

$$\Rightarrow \alpha \approx 40.2^\circ \quad \text{tai } \alpha \approx 180^\circ - 40.2^\circ = \underline{139.8^\circ}$$

$$(\alpha = \sin^{-1} 0.64592)$$