

MaA3 - kertaus

1. $\gamma = 180^\circ - 112^\circ = 68^\circ$ (vieruskulmat) TAI $112^\circ = 55^\circ + \alpha$ (ristikulmat)
 $\alpha = 57^\circ$

$$\alpha + 55^\circ + \gamma = 180^\circ \text{ (oikokulma)}$$

$$\alpha = 180^\circ - 55^\circ - 68^\circ = \underline{57^\circ}$$

$$\beta + 55^\circ + 67^\circ = 180^\circ \text{ (kolmen kulman summa)}$$

$$\beta = 180^\circ - 67^\circ - 55^\circ = \underline{58^\circ}$$

$\gamma \neq 67^\circ \rightarrow$ suorat eivät ole yhdensuuntaiset

2. a) Kolmiot ABC ja ADE ovat yhdenmuotoiset

- molemmissa $\angle A$

- $\angle B = \angle D$ (kk-lause)

$$\frac{4}{4+x} = \frac{5}{7}$$

$$5(4+x) = 4 \cdot 7$$

$$20 + 5x = 28$$

$$5x = 8$$

$$x = \frac{8}{5} = \underline{1\frac{3}{5}}$$

b) $x^2 + (x-2) = 180^\circ$ (vieruskulmat)

$$x^2 + x - 182 = 0 \text{ (laskin)}$$

$$x = -14 \text{ tai } \underline{x = 13}$$

ei kelpaa

3. a) Karha Luonto
1 25 000
34 cm x

$$\frac{1}{34 \text{ cm}} = \frac{25\,000}{x}$$

$$x = 34 \text{ cm} \cdot 25\,000$$

$$= 850\,000 \text{ cm}$$

$$= 8\,500 \text{ m}$$

$$= 8,5 \text{ km}$$

b) $\frac{A_1}{A_2} = k^2$

$$\frac{54 \text{ cm}^2}{x} = \left(\frac{1}{25\,000}\right)^2$$

$$\frac{54 \text{ cm}^2}{x} = \frac{1}{25\,000^2}$$

$$x = 54 \text{ cm}^2 \cdot 25\,000^2$$

$$= 33\,750\,000\,000 \text{ cm}^2$$

$$= 3\,375\,000 \text{ m}^2$$

$$= 3,375 \text{ km}^2$$