

Chapitre 11 : Trigonométrie

Série A

Série B

Exercice 1.

$$\sin(\alpha) = \frac{8}{17}$$

$$\cos(\alpha) = \frac{15}{17}$$

$$\tan(\alpha) = \frac{8}{15}$$

$$\alpha \cong 28,1^\circ$$

$$\sin(\alpha) = \frac{\sqrt{11}}{6}$$

$$\cos(\alpha) = \frac{5}{6}$$

$$\tan(\alpha) = \frac{\sqrt{11}}{5}$$

$$\alpha \cong 33,6^\circ$$

Exercice 2.

a) $\beta = 55^\circ$

$$AB \cong 6,10 \text{ cm}$$

$$BC \cong 3,50 \text{ cm}$$

$$\sigma \cong 8,75 \text{ cm}^2$$

b) $\beta = 48^\circ$

$$AB \cong 5,98 \text{ m}$$

$$AC \cong 4,44 \text{ m}$$

$$\sigma \cong 8,88 \text{ m}^2$$

c) $\beta = 27^\circ$

$$AC \cong 1,362 \text{ km}$$

$$BC \cong 2,673 \text{ km}$$

$$\sigma \cong 1,820 \text{ km}^2$$

$$\alpha = 18^\circ$$

$$AB \cong 6,5 \text{ cm}$$

$$BC \cong 2,0 \text{ cm}$$

$$\sigma \cong 6,2 \text{ cm}^2$$

$$\alpha = 52^\circ$$

$$AB \cong 6,7 \text{ m}$$

$$AC \cong 4,1 \text{ m}$$

$$\sigma \cong 11,0 \text{ m}^2$$

$$\alpha = 41^\circ$$

$$AC \cong 3,170 \text{ km}$$

$$BC \cong 2,755 \text{ km}$$

$$\sigma \cong 4,367 \text{ km}^2$$

Exercice 3.

a) $\widehat{DFE} = 67^\circ$

$DE \cong 7,54 \text{ m}$

$DF \cong 8,19 \text{ m}$

$\sigma \cong 12,062 \text{ m}^2$

b) $\widehat{IGH} = 43^\circ$

$IG \cong 3,072 \text{ km}$

$IH \cong 2,864 \text{ km}$

$\sigma \cong 4,399 \text{ km}^2$

c) $\widehat{JKL} = 28^\circ$

$JK \cong 4'325,67 \text{ m}$

$KL \cong 4'899,13 \text{ m}$

$\sigma \cong 4'974'521,5 \text{ m}^2$

$\widehat{MNO} \cong 34,3^\circ$

$\widehat{OMN} \cong 55,7^\circ$

$MN \cong 266,27 \text{ m}$

$\sigma = 16'500 \text{ m}^2$

$\widehat{PQR} \cong 28,7^\circ$

$\widehat{RPQ} \cong 61,3^\circ$

$QR \cong 2,193 \text{ km}$

$\sigma \cong 1,316 \text{ km}^2$

$\widehat{STU} \cong 31,0^\circ$

$\widehat{TUS} \cong 59,0^\circ$

$SU = 3 \text{ m}$

$TU = \sqrt{34} \cong 5,831 \text{ m}$

Exercice 4.

$\beta = \gamma = 75^\circ$

$AB = AC \cong 7,73 \text{ cm}$

$\sigma \cong 14,93 \text{ cm}^2$

$\widehat{EDF} = 80^\circ$

$\widehat{DFE} = 50^\circ$

$EF \cong 5,14 \text{ m}$

$DF = 4 \text{ m}$

$\sigma \cong 7,88 \text{ m}^2$