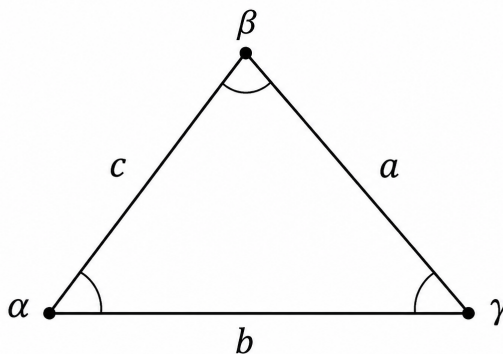
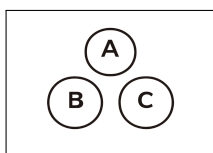


46

Laws of Triangles Law of Tangents

C



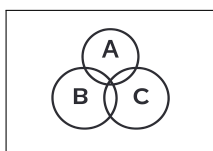
Opposite $\alpha \rightarrow$ side a
Opposite $\beta \rightarrow$ side b
Opposite $\gamma \rightarrow$ side c

$$\alpha = 80^\circ$$

$$\gamma = 40^\circ$$

$$(a - c)/(a + c) = \tan(20^\circ)/\tan(60^\circ)$$

$$(a - c)/(a + c) = 0.3640/1.7321 \approx 0.2101$$



$$(a - c)/(a + c) = \tan(1/2(\alpha - \gamma))/\tan(1/2(\alpha + \gamma))$$

$$\alpha = 75^\circ$$

$$\gamma = 15^\circ$$

$$(a - c)/(a + c) = ?$$

?

46

Laws of Triangles
Law of Tangents

C



$$\alpha = 75^\circ$$

$$\gamma = 15^\circ$$

$$(a - c)/(a + c) = \tan(1/2(\alpha - \gamma))/\tan(1/2(\alpha + \gamma))$$

$$(a - c)/(a + c) = \tan(30^\circ)/\tan(45^\circ)$$

$$(a - c)/(a + c) = (1/\sqrt{3})/1$$

$$(a - c)/(a + c) = 1/\sqrt{3}$$