Law of Sines

More oblique triangles

It's as simple as this

Law of Sines

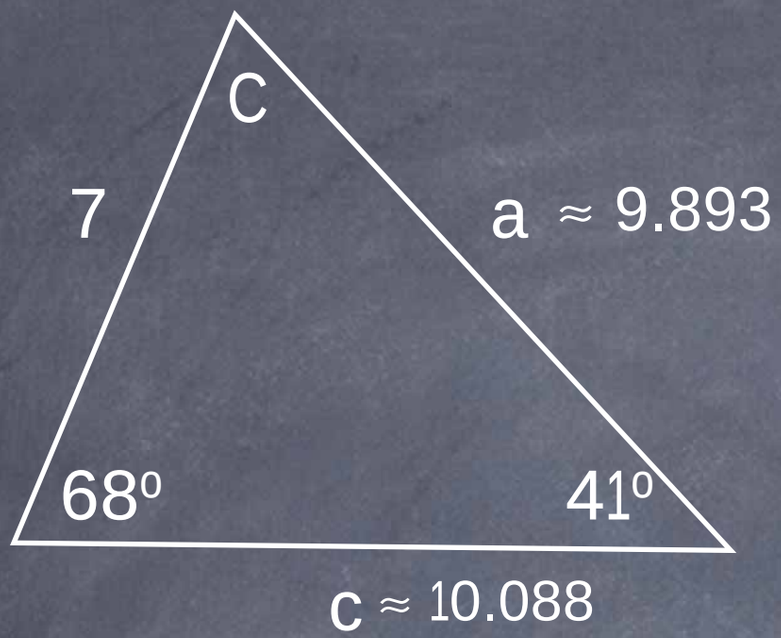
$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

As before, angle A is opposite side a, angle B is opposite side b, etc.

One other formula that comes with this law will be useful in finding the area of a triangle

$$Area = \frac{1}{2}ab\sin C \qquad Area = \frac{1}{2}bc\sin A$$

$$Area = \frac{1}{2}ac\sin B$$



$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$\frac{\sin 68°}{a} = \frac{\sin 41°}{7} = \frac{\sin 71°}{c}$$

use supplementary angles to find this

$$\frac{\sin 41°}{7} = \frac{\sin 71°}{c}$$

cross-multiply

$$\frac{\sin 68°}{a} = \frac{\sin 41°}{7}$$

cross-multiply again

$$7 \sin 68° = a \sin 41°$$

$$\frac{7 \sin 71°}{\sin 41°} = c \approx 10.088$$

$$\frac{7 \sin 68°}{\sin 41°} = a \approx 9.893$$