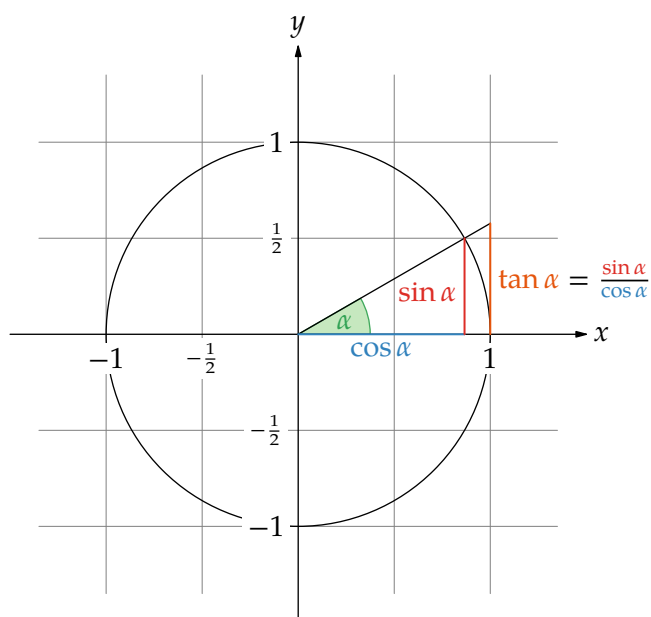


Some examples for Metapost

Toby Thurston

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This short document sets out some intermediate examples of technical drawing with METAPOST. Some of the diagrams are adapted from the excellent TikZ manuals, to facilitate comparison. You will find some commentary in the text here, but there is more in the source file. The focus is on what you can do with the plain METAPOST format; the reason for this is that it is (relatively) simple and has a nice consistent syntax. The usual style presented here is to define points and paths; then draw them; then add text and labels.



The **angle** α is 30° in the example ($\pi/6$ in radians). The **sine of** α , which is the height of the red line, is

$$\sin \alpha = 1/2.$$

By the Theorem of Pythagoras we have $\cos^2 \alpha + \sin^2 \alpha = 1$. Thus the length of the blue line, which is the **cosine of** α , must be

$$\cos \alpha = \sqrt{1 - 1/4} = \sqrt{3}/2.$$

This shows that **tan** α , which is the height of the orange line, is

$$\tan \alpha = \frac{\sin \alpha}{\cos \alpha} = 1/\sqrt{3}.$$