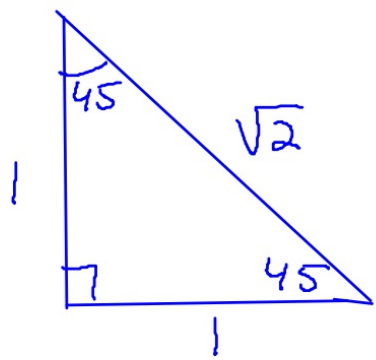


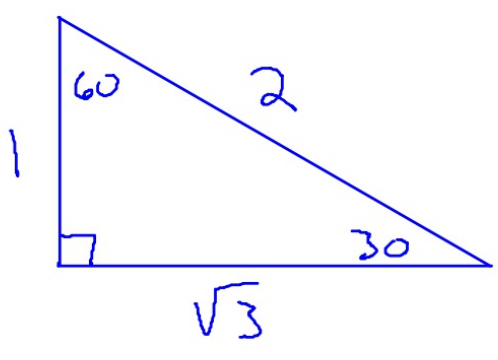
A. What are the sine, cosine, and tangent ratios for 30°, 45°, and 60° angles?



$$\sin 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\cos 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\tan 45^\circ = \frac{1}{1} = 1$$



$$\sin 30^\circ = \frac{1}{2}$$

$$\cos 30^\circ = \frac{\sqrt{3}}{2}$$

$$\tan 30^\circ = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

$$\sin 60^\circ = \frac{\sqrt{3}}{2}$$

$$\cos 60^\circ = \frac{1}{2}$$

$$\tan 60^\circ = \sqrt{3}$$

How are the sine and cosine of complementary angles related?

In $\triangle FGH$, what is the value of y ?

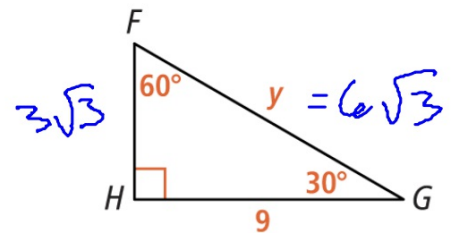
iter your answer

$$\cos 30^\circ = \frac{9}{y}$$

$$\frac{\sqrt{3}}{2} = \frac{9}{y}$$

$$\sqrt{3} y = 18$$

$$y = \frac{18}{\sqrt{3}} = \frac{18\sqrt{3}}{3} = 6\sqrt{3}$$



$$\frac{9}{\sqrt{3}} = \frac{9\sqrt{3}}{3}$$

3. b. How can you write an equivalent expression for $\cos 70^\circ$ using sine? An equivalent expression for $\sin 34^\circ$ using cosine?

$$\cos 70^\circ = \sin 20^\circ$$

$$\sin 34^\circ = \cos 56^\circ$$