

Question 27687

Half-angle formula for sine function is $\sin\left(\frac{x}{2}\right) = \sqrt{\frac{1 - \cos x}{2}}$ for $0 \leq x \leq \pi$. One knows that table value of $\cos 30 = \cos \frac{\pi}{6} = \frac{\sqrt{3}}{2}$. Hence,

$$\sin(15) = \sqrt{\frac{1 - \frac{\sqrt{3}}{2}}{2}} = \sqrt{\frac{2 - \sqrt{3}}{4}} \approx 0.26 .$$