

Use the exact value of trigonometry to evaluate the following

A. $2 \sin 60^\circ + \tan 45^\circ + \cos^2 60^\circ$ a) $\frac{5 + 4\sqrt{3}}{4}$ b) $4\sqrt{3}$ c) $5 + 4\sqrt{3}$

B. $\frac{\cos x + \sin x}{2 \sin x + \cos x}$, given that $\tan x = \frac{1}{2}$ when x is acute
a) $\frac{3}{\sqrt{5}}$ b) $\frac{3}{4}$ c) $\frac{4}{5}$

C. $2 \sin 60^\circ - \cos 30^\circ$ a) $2/\sqrt{3}$ b) $1/2$ c) $\sqrt{3}/2$

D. $\frac{\sin 30^\circ - \cos 30^\circ}{\sin 60^\circ}$ a) $\sqrt{3}/2$ b) $1/2$ c) $-1/2$

E. $\sin 30^\circ + \tan 45^\circ - \cos 60^\circ$ a) 2 b) 1 c) $\sqrt{3}$

F. $\frac{\cos 60^\circ - \sin 60^\circ}{\sin 60^\circ + \cos 60^\circ}$ a) 0 b) 1 c) 2

G. $2 \tan 45^\circ - \tan 60^\circ$ a) $\sqrt{3}$ b) $2 - \sqrt{3}$ c) 2