

Question: If $a^2 + b^2 + c^2 = 1$, then $ab + bc + ca$ lies in the interval:

a)

$$\left[-\frac{1}{2}, 1\right]$$

b)

$$\left[\frac{1}{2}, 2\right]$$

c)

$$[-1, 2]$$

d)

$$\left[-1, \frac{1}{2}\right]$$

Answer:

$$\left[-\frac{1}{2}, 1\right]$$