

Answer on Question #51025 – Math – Analytic Geometry

a and b are vectors defined by $a = 8i + 2j - 3k$ and $b = 3i - 6j + 4k$, where i, j, k are mutually perpendicular unit vectors. Calculate $a \cdot b$.

a) 1

b) 0

c) 2

d) 4

Solution

Dot product $a \cdot b = 8 * 3 + 2 * (-6) + (-3) * 4 = 24 - 12 - 12 = 0$.

Answer: b) 0.