



Purple vector = $\langle 2, 0, 2 \rangle$, P

Cyan vector = $\langle 0, 2, 2 \rangle$, C

$$P \cdot C = |P| \cdot |C| \cdot \cos(\theta)$$

$$P \cdot C = (P_1 \cdot C_1) + (P_2 \cdot C_2) + (P_3 \cdot C_3) = (2 \cdot 0) + (0 \cdot 2) + (2 \cdot 2) = 4$$

$$|P| = 8^{1/2}$$

$$|C| = 8^{1/2}$$

$$|P| \cdot |C| = 8$$

Final equation:

$$4 = 8 \cos(\theta)$$

$$\frac{1}{2} = \cos(\theta)$$

$$\arccos(1/2) = \theta = \pi/3 \text{ rad}$$

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