Example #1 p. 6 Ch. 9

Find the dot product of
u = < 1 , 1 > & **v** = < −1 , 1 >
Indicate what this means.

Find the dot product of u & v

- Multiply the vertical components of u & v

$$u_a \bullet v_a = 1 \bullet -1 = -1$$

- Multiply the horizontal components of u & v

$$u_b \bullet v_b = 1 \bullet 1 = 1$$

- The dot product is a scalar. Sum vertical & horizonatl component products

$$u \text{ dot } v = -1 + 1 = 0$$

The Dot Product = 0

Since the dot product is zero, this means that the vectors are orthogonal to one another.

Orthogonal means at right angles.