

Go to the website: Visualizing the Dot Product and play with the simulation for a few minutes. Then answer the following questions:

1. From the geometric definitions of the dot product

$$\vec{v} \cdot \vec{w} = |\vec{v}| |\vec{w}| \cos \gamma$$

how can you tell when two vectors are perpendicular?

2. From the algebraic definition of the dot product

$$\vec{v} \cdot \vec{w} = v_x w_x + v_y w_y$$

how can you tell when two vectors are perpendicular?