

$$5) \quad v_1 = \{1, 2, -1\}, \quad v_2 = \{3, -6, 2\}$$

$$\text{dot_prod} = (1 \times 3) + (2 \times -6) + (-1 \times 2)$$

$$= 3 - 12 - 2$$

$$\boxed{\text{dot_prod} = -11}$$