

$$18) \quad v = \{2, -3, z\} \quad \& \quad u = \{1, 4, 5\}$$

$$v \cdot u = (2 \times 1) + (-3 \times 4) + (z \times 5) = 0$$

$$2 - 12 + 5z = 0$$

$$-10 + 5z = 0$$

$$5z = 10$$

$$z = 10/5$$

$$\boxed{z = 2}$$

$$\boxed{8, 6 = 1}$$