



$$|\mathbf{u} + \mathbf{v}|^2 + |\mathbf{u} + \mathbf{v}|^2 = 2|\mathbf{u}|^2 + 2|\mathbf{v}|^2$$

$$(2^2 + 0^2) + (4^2 + 2^2) = 2(3^2 + 1^2) + 2(1^2 + 1^2)$$

$$4 + 20 = 2 \cdot 10 + 2 \cdot 2$$