1 | orthogonal def

Two vectors $u, v \in V$ are called *orthogonal* if $\langle u, v \rangle = 0$

2 | results

2.1 | orthogonal ~= perpendicular

2.2 | Axler 6.12 orthogonality and zero

2.2.1 | 0 is orthogonal to every vector in V

2.2.2 | 0 is the only vector in V that is orthogonal to itself

2.3 | Axler 6.13 Pythagorean Theorem

Suppose u and v are orthogonal vectors in V. Then

$$\|u + v\|^2 = \|u\|^2 + \|v\|^2$$