

(6) Encontrar la longitud de los vectores.

(a) $(2, 3)$,

(b) (t, t^2) ,

(c) $(\cos \phi, \sin \phi)$.

$$a) \|(2, 3)\| = \sqrt{\langle (2, 3), (2, 3) \rangle} = \sqrt{13}$$

$$b) \|(t, t^2)\| = \sqrt{\langle (t, t^2), (t, t^2) \rangle} = \sqrt{t^2 + t^4} = \sqrt{t^2(1+t^2)} = |t| \sqrt{t^2+1}$$

$$c) \|(\cos \theta, \sin \theta)\| = \sqrt{\langle (\cos \theta, \sin \theta), (\cos \theta, \sin \theta) \rangle} = \sqrt{\cos^2 \theta + \sin^2 \theta} = \sqrt{1} = 1$$