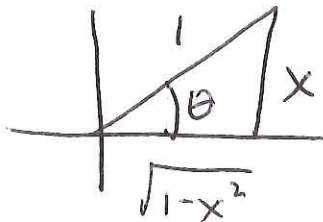


1.5]

$$2a) \tan(\arcsin(x)) = \tan \theta = \frac{x}{\sqrt{1-x^2}}$$

$$\text{Let } \arcsin(x) = \theta$$

$$\Rightarrow \sin \theta = x$$



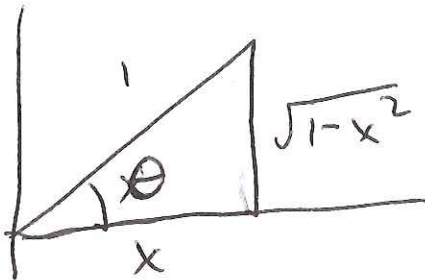
$$b) \sin(2 \arccos(x))$$

$$\text{Let } \arccos(x) = \theta \quad \text{or} \quad \cos \theta = x$$

$$\Rightarrow \sin(2 \arccos(x)) = \sin(2\theta) = 2 \sin \theta \cos \theta$$

$$= 2 \sqrt{1-x^2} \cdot x$$

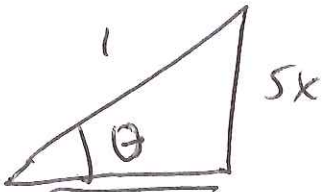
$$= 2x \sqrt{1-x^2}$$



2c)

$$\text{Let } \arcsin(5x) = \theta$$

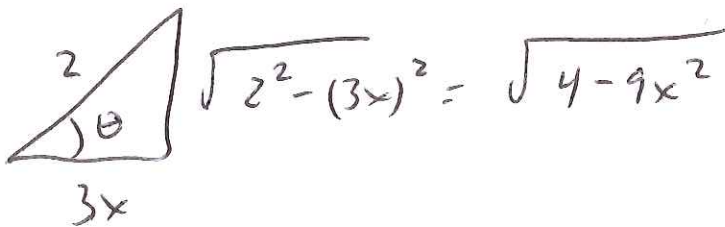
$$\text{Thus } \sin \theta = 5x$$



$$\sqrt{1 - (5x)^2} = \sqrt{1 - 25x^2}$$

$$\cos(\arcsin(5x)) = \cos \theta = \frac{\sqrt{1 - 25x^2}}{1} = \sqrt{1 - 25x^2}$$

2d) Let $\arccos\left(\frac{3x}{2}\right) = \theta$ Thus $\cos(\theta) = \frac{3x}{2}$



$$\tan\left(\arccos\left(\frac{3x}{2}\right)\right) = \tan \theta = \frac{\sqrt{4 - 9x^2}}{3x}$$