5)
g)
$$\lim_{x \to 0} \frac{1 - \cos 2x}{x} = \lim_{X \to 0} \frac{1 - 1 + 2\sin^2 x}{x}$$

$$* \cos 2x = 1 - 2\sin^2 x$$

$$= \lim_{X \to 0} \frac{2\sin x \sin x}{x} = 0$$

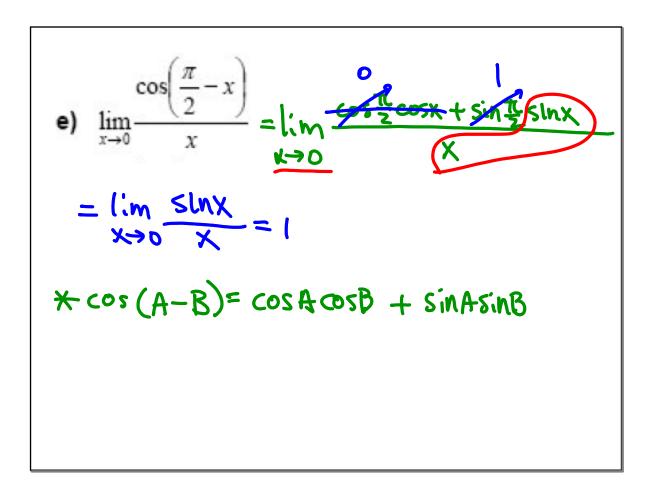
$$* \lim_{X \to 0} \frac{1 - \cos x}{x} = 0$$

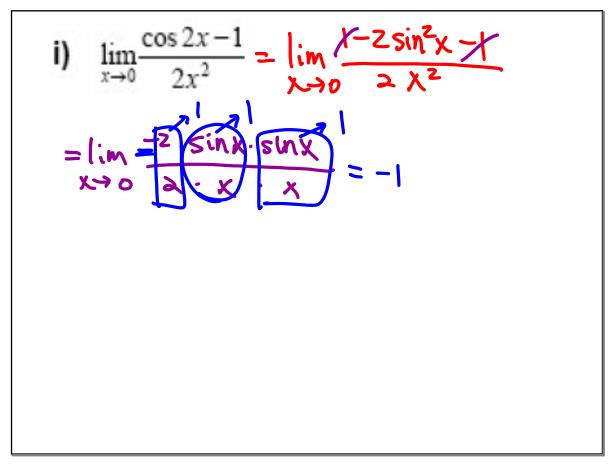
$$\lim_{X \to 0} \frac{1 - \cos x}{x} = 0$$

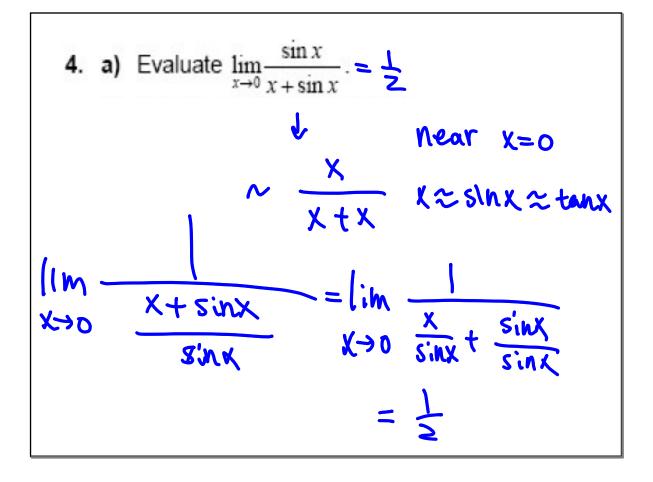
$$\lim_{X \to 0} \frac{1 - \cos x}{x} = 1$$

$$\lim_{X \to 0} \frac{1 - \cos x}{x} = 1$$

$$\lim_{X \to 0} \frac{1 - \cos x}{x} = 1$$





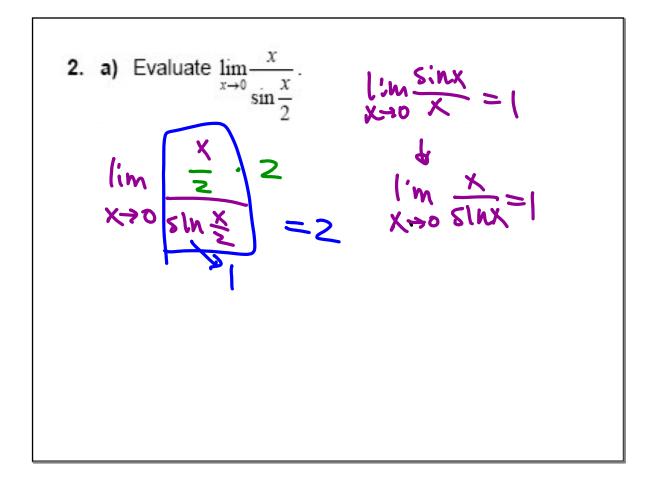


f)
$$\lim_{x \to 0} \frac{(1 - \cos x)(1 + \cos x)}{(\tan x)(1 + \cos x)}$$

=
$$\lim_{x \to 0} \frac{1 - \cos^2 x}{(\tan x)(1 + \cos x)} = \lim_{x \to 0} \frac{\sin x \sin x}{\sin x}$$

$$x \to 0 \quad \tan x (1 + \cos x) \xrightarrow{x \to 0} \frac{\sin x}{\cos x} (1 + \cos x)$$

=
$$\lim_{x \to 0} \frac{\sin x \cos x}{1 + \cos x} = 0$$



b)
$$\lim_{x \to 0} \frac{\sin 3x}{5} = \frac{6}{5} = 0$$