

$$C) x^2 - 7x + 10$$

$$(x-5)(x-2)$$

$$x=5 \quad x=2$$

$$\tan \theta = 5 \quad \tan \theta = 2$$

$$x = \tan^{-1}(5) \quad x = \tan^{-1}(2)$$

$$x = 78.7 \quad x = 63.43$$

$$D) y = \cos^2(2\theta/5)$$

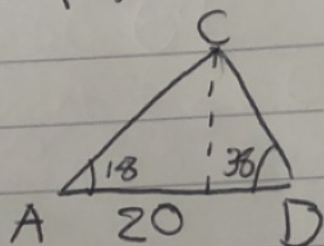
$$\sqrt{y} = \cos(2\theta/5)$$

$$\cos^{-1}(\sqrt{y}) = 2\theta/5$$

$$5 \cos^{-1}(\sqrt{y}) = 2\theta$$

$$5/2 \cos^{-1}(\sqrt{y}) = \theta$$

E)



$$\angle ACB = 124^\circ$$

$$\angle CAB = 18^\circ$$

$$\angle CBA = 38^\circ$$

$$\frac{AC}{\sin 38} = \frac{20}{\sin 124}$$

$$AC = \frac{20 (\sin 38)}{\sin 124} = 14.8 \text{ miles}$$

$$\frac{BC}{\sin 18} = \frac{20}{\sin 124}$$