

Starter

 $289.48^\circ$ 

1) Solve  $6 + 3\cos(x) = 7$

$3\cos x = 1$

$\cos x = \frac{1}{3}$

2) Solve  $y = x^2 + 2x - 15$

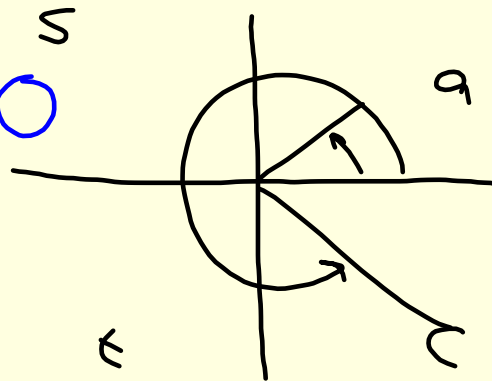
$x = \cos^{-1}\left(\frac{1}{3}\right) = 70.52$

$x^2 + 2x - 15 = 0$

$(x-3)(x+5) = 0$

$x = 3$

$x = -5$



Pick 2 Examples to work through....

$\tan A = \frac{\sin A}{\cos A}$

$\sin^2 A + \cos^2 A = 1$

$$\underbrace{(2\cos B + 3\sin B)^2}_{\text{green}} + \underbrace{(3\cos B - 2\sin B)^2}_{\text{red}} = 13$$

$$(2\cos B + 3\sin B)(2\cos B + 3\sin B)$$

$$= 4\cos^2 B + 6\cos B\sin B + 6\cos B\sin B + 9\sin^2 B$$

$$= 4\cos^2 B + 12\cos B\sin B + 9\sin^2 B \leftarrow$$

$$(3\cos B - 2\sin B)(3\cos B - 2\sin B)$$

$$9\cos^2 B - 6\cos B\sin B - 6\cos B\sin B + 4\sin^2 B \leftarrow$$

$$= 13\cos^2 B + 13\sin^2 B \leftarrow$$

$$= 13(\cos^2 B + \sin^2 B)$$

$$= 13 \times 1$$

$$= 13$$

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$$\tan A = \frac{\sin A}{\cos A}$$

Example 1

$$\sin^2 A + \cos^2 A = 1$$
$$\cos^2 = 1 - \sin^2$$

$$5e) \tan^2 p - \tan^2 p \sin^2 p$$

$$= \tan^2 p (1 - \sin^2 p)$$

$$= \tan^2 p \cos^2 p$$

$$= \left(\frac{\sin}{\cos}\right)^2 \cos^2 p$$

$$= \frac{\sin^2 p}{\cos^2 p} \cos^2 p$$

$$= \sin^2 p$$