

11.34am

11/11/20

ACHA4000/ACMA4006

1910311 (Jacob James)

Question 3

a.

i) $12x^2 = 31x + 15$

$$12x^2 - (31x + 15) = 31x + 15 - (31x + 15)$$

$$12x^2 - 31x - 15 = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-(-31) \pm \sqrt{(-31)^2 - 4(12)(-15)}}{2(12)}$$

$$x = \frac{31 \pm \sqrt{1681}}{24}$$

$$x = 3, x = 0.42$$

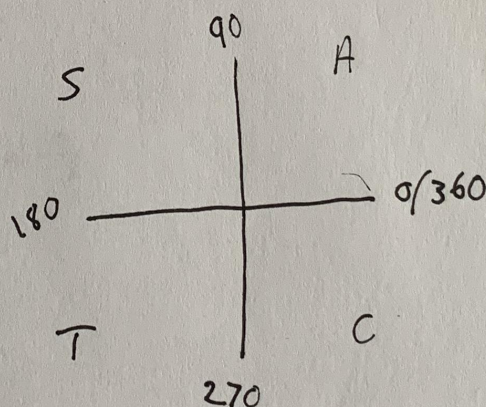
b) i) $\cos x = 0.62$

$$x = \cos^{-1}(0.62)$$

$$x = 51.68$$

$$x = 360 - 51.68$$

$$x = 308.32$$



ii) $7 \sin x = 4$

$$\sin x = \frac{4}{7}$$

$$x = 34.85$$

$$x = 145.15$$