

$$iv) (z_3)^2 - \bar{z}_1$$

$$(-5-2j)(-5-2j) - (2-5j)$$

$$= 25 + 10j + 10j + 4j^2 - (2-5j) \quad j^2 = -1$$

$$= 21 + 20j - (2-5j)$$

$$= 19 + 25j$$

$$b) 5x^2 = -3x - 12$$

$$a = 5 \quad b = 3 \quad c = 12$$

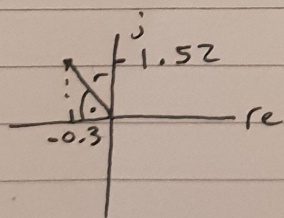
$$5x^2 + 3x + 12 = 0$$

$$x = \frac{-3 \pm \sqrt{9 - 4(5)(12)}}{10}$$

$$x = \frac{-3 \pm \sqrt{-231}}{10}$$

$$x = \frac{-3}{10} + \frac{15.20j}{10}$$

$$x = \frac{-3}{10} - \frac{15.20j}{10}$$



$$r^2 = 0.3^2 + 1.52^2$$

$$r^2 = 2.40$$

$$r = 1.55$$

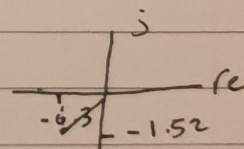
$$\tan \theta = \frac{1.52}{0.3}$$

$$\theta = 78.84^\circ$$

$$\theta = 180 - 78.84$$

$$\theta = 101.16^\circ$$

$$1.55 (\cos 101.16 + j \sin 101.16)$$



$$r^2 = 0.3^2 + 1.52^2$$

$$r = 1.55$$

$$\tan \theta = \frac{1.52}{0.3}$$

$$\theta = 78.84^\circ$$

$$\theta = 180 + 78.84$$

$$\theta = 258.84^\circ$$

$$1.55 (\cos 258.84^\circ + j \sin 258.84^\circ)$$