

10. a)

i)

Find the range of values for m

$$3x^2 - 6x + m = 0$$

has no real roots

$$b^2 - 4ac < 0$$

$$a = 3$$

$$b = -6$$

$$c = m$$

$$(-6)^2 - 4 \times (3) \times (m) < 0$$

$$36 - 12m < 0$$

$$36 < 12m$$

$$\frac{36}{12} < m$$

$$3 < m$$

$$\text{or } m > 3$$

ii)

Curve C has equation