

Sketching Quartics

Sketch the following curves and indicate clearly the points of intersection with the axes.

(a)

$$y = x(x - 2)(x + 3)(x - 1)$$

(b)

$$y = (x + 1)(x - 2)(x + 3)(x - 4)$$

(c)

$$y = -(x - 4)^2(x - 2)^2$$

(d)

$$y = x(x + 1)^2(2 - x)$$

(e)

$$y = (x + 2)^4$$

(f)

$$y = (x^2 - 4x - 5)(x^2 + 3x - 4)$$