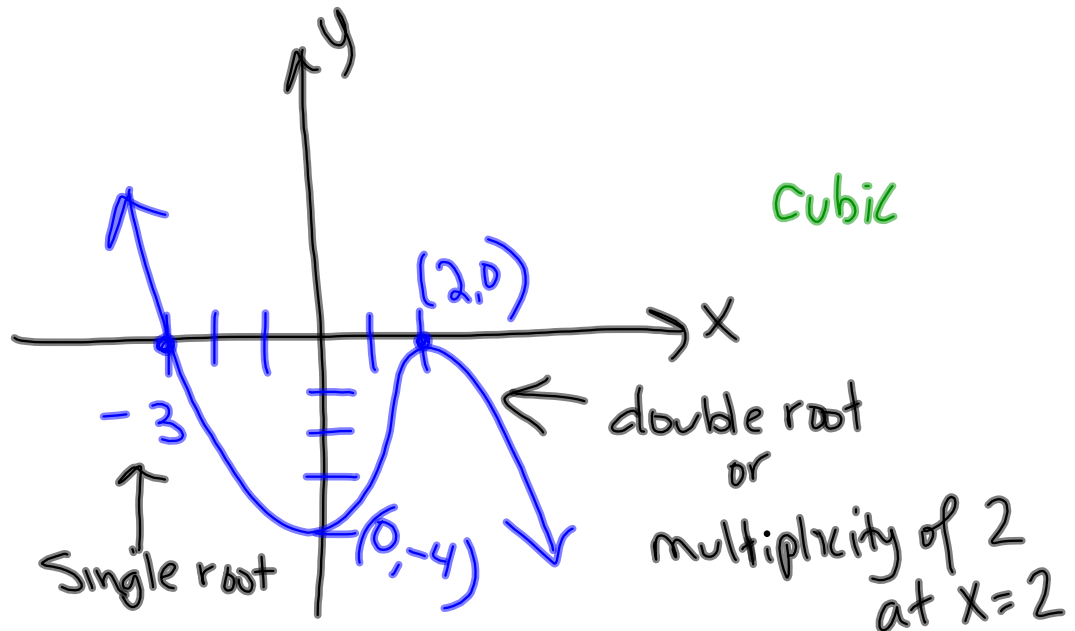


## Determining the Equation of a polynomial from the graph



$$P(x) = a(x+3)(x-2)^2$$

$$y =$$

$$pt \begin{pmatrix} x \\ y \end{pmatrix} (0, -4)$$

$$-4 = a(0+3)(0-2)^2$$

$$-4 = 12a$$

$$\frac{-4}{12} = a$$

$$-\frac{1}{3} = a$$

$$P(x) = -\frac{1}{3}(x+3)(x-2)^2$$

1.  $y = (x+3)(x+1)(x-2)(x+2)$  positive Quartic  $\curvearrowright$   
roots:  $-3, -1, 2, -2$   
y-int  $(0, -12)$

