Find the roots, singularities, and asymptote lines of the rational function below and draw the graph.

$$Y = \frac{X^3 + X^2 - 8X - 12}{X^2 - 4X + 3}$$

$$= \frac{9}{X - 1} + X + 5$$

Note : the common term, (X - 3) is eliminated

Root	Singularities	Asymptotes	Undefined
$X^3 + X^2 - 8X - 12$	$X^2 + 4X + 4$	$X + 5$	$X = 3$
$(X + 2)(X + 2)(X - 3) = 0$	$(X - 1)(X - 3) = 0$		
$x1, x2 = -1, 2$	$x1 = 1$		

Undefined point exist in this function. $X = 3$, then the original function is 0/0 (undefined)