A polynomial has 5 roots. There is a double root at 3, a single root at -2, and a double root at 0. Find a possible equation for the function.

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

A polynomial has 3 roots at -4, 3, and 1. What are the factors Of the polynomial?

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

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A function has roots at -3 and 4, and 4 has a multiplicity of 2 and goes through the point (7,90). Find the general form of the equation.

(x+4)(x-3)(x-1)

A polynomial has roots at -2, -4, and -5 and goes through the point (2,336). Find the equation of the polynomial in general form.

$$3x^3 - 15x^2 - 24x + 144$$

Given a polynomial With roots at -2, 1, and 5, and goes through the point (6,280), give a possible general form equation.

 $2x^3 + 22x^2 + 76x + 80$

Given a 3rd degree polynomial with roots at -3, 0, and 3, find the general form equation if the function includes the point (8, -2200).

$$y = 7x^3 - 28x^2 - 49x + 70$$

Write the factored equation for a polynomial with a root at 3 and multiplicity of 2 and root 4 with multiplicity of 5.

$$y = -5x^3 + 45x$$



What could be a possible equation for this graph?

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