NAME _____

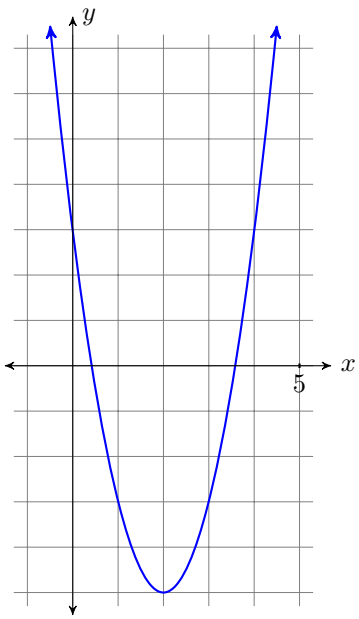
Quiz 4

1. Factor the polynomial $f(x) = x^5 - x^4 - 5x^3 + x^2 + 8x + 4$ completely.

$$\boxed{f(x) = (x+1)^3(x-2)^2}$$

2. Graph $g(x) = 2x^2 - 8x + 3$.

Solution:



3. Use long division to write $\dfrac{p(x)}{d(x)} = \dfrac{2x^3 + 7x^2 - x + 26}{x^2 + 3}$ in the form $\dfrac{p(x)}{d(x)} = q(x) + \dfrac{r(x)}{d(x)}$.

$$\boxed{\frac{p(x)}{q(x)} = 2x + 7 + \frac{-7x + 5}{x^2 + 3}}$$