① $\dfrac{2x^3-16}{x^2-4}$ Simplify

$$\frac{2(x^3-8)}{x^2-4} = \frac{2\cancel{(x-2)}(x^2+2x+4)}{\cancel{(x-2)}(x+2)} = \boxed{\frac{2(x^2+2x+4)}{x+2}}$$

② $\dfrac{2x^2-9x+4}{2x-8} \div \dfrac{4x^2-1}{x+3}$

8, -8, -1, -9

$(x-8)(x-1)$

$\frac{}{2}$ $\frac{}{2}$

$(x-4)(2x-1)$

$$\frac{\cancel{(x-4)}\cancel{(2x-1)}}{2\cancel{(x-4)}} \cdot \frac{x+3}{\cancel{(2x-1)}(2x+1)} = \boxed{\frac{x+3}{2(2x+1)}}$$

③ $f(x) = 5x - 2x^2$ $f(-3) = ?$

$f(-3) = 5(-3) - 2(-3)^2$ $f(-3) = -15 - 18 = \boxed{-33}$

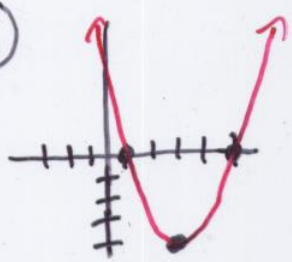
$-15 - 2(9)$

④ $y = -x^2 + 5x - 2$ y-intercept

$x = 0$ $y = -(0)^2 + 5(0) - 2$ $y = -2$ $\boxed{(0,-2)}$

$0 + 0 - 2$

⑤



a) Vertex Form

b) Standard Form

a) vertex $(3, -4)$ $y = a(x-h)^2 + k$ $\boxed{y = (x-3)^2 - 4}$

h, k

b) $y = (x-1)(x-5) \Rightarrow \boxed{y = x^2 - 6x + 5}$