

Chap 3 Review.

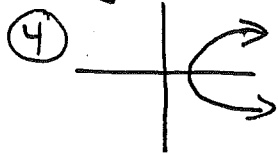
Find $\frac{f(x+h) - f(x)}{h}$ (the difference quotient)

① $f(x) = 3x + 7$

② $f(x) = x^3 - x^2$

Determine if the following are functions & if 1 to 1

③ $y = 3x^2 + 12$



⑤ $x = 4$

⑥ $f(x) = (1, 7), (2, 9), (3, 9), (2, 8)$

⑦ $f(x) = (1, 7), (3, 6), (-2, 6), (1, -4)$

Find the vertex & state if max or min.

⑧ $y = -6(x-2)^2 - 5$

⑨ $y = 3(x-5)^2 + 2$

⑩ $y = -x^2 + 8x - 2$

⑪ $y = -(x+2)(x+6)$

Put the following in vertex form.

⑫ $y = x^2 + 4x - 5$

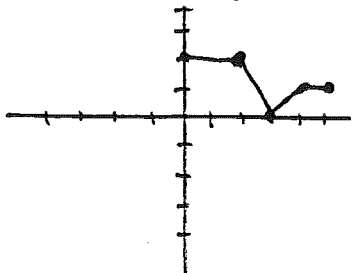
⑬ $y = -3x^2 + 6x - 1$

Describe the transformation from the parent graph & state the max or min. pt.

⑭ $y = -(x-2)^2 + 6$

⑮ $y = 2|x+7| - 3$

⑯ If the graph of $f(x)$ is as shown, sketch the graph of $-f(x+2)$



Find the inverse of the following

⑰ $f(x) = 3x + 5$

⑱ $f(x) = (1, 4), (3, 7), (2, -9), (-1, 6)$

⑲ $f(x) = 2x^2 - 1$