

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

$$= \frac{1}{4} + \frac{2}{2} - 1 = \frac{3}{4}$$

$$f(x) = 0^2 + 3 \cdot 0 - 1$$

$$= 0 + 0 - 1$$

$$= -1$$

$$f(x) = 1^2 + 3 \cdot 1 - 1$$

$$= 1 + 3 - 1 = 3$$

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

$$= \frac{9}{4} + \frac{9}{2} - 1$$

$$\frac{23}{4}$$

$$3) f(x) = x^2$$

$$f(a+h) = a^2 + 2ah + h^2$$

$$f(a) = a^2$$

$$a^2 + 2ah + h^2 - a^2$$
$$f = 2ah + h^2$$