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Muller

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

$$f'(x) = x$$

$$4 \quad f\left(\frac{a}{h}\right) + f(a)$$

$$f\left(\frac{a}{h}\right) = \frac{F_2 - F_1}{x_2 - x_1}$$

$$F_2 = \frac{a}{h} \quad F_1 = a$$

$$x_2 = 2 \quad x_1 = x$$

$$x = \frac{\frac{a}{h} - a}{2 - x}$$

$$= a + 2$$

Evaluation

$$1 \quad F(x) = x^2 + 3 - 1$$

$$F(x) = \frac{F_2 - F_1}{x_2 - x_1}$$

$$F_2 = \frac{1}{2} \quad F_1 = \frac{3}{2}$$

$$x_2 = x^2 \quad x_1 = 1$$

$$x = \frac{\frac{1}{2} - \frac{3}{2}}{\frac{1}{2} - 1}$$
$$= \frac{-1}{-\frac{1}{2}}$$

$$2 \quad F(x) = \frac{x}{2} + 1$$

$$F(x) = \frac{F_2 - F_1}{x_2 - x_1}$$

$$F_2 = \frac{1}{2} \quad F_1 = \frac{3}{2}$$

$$x_2 = \frac{x}{2} \quad x_1 = 1$$

$$x = \frac{\frac{1}{2} - \frac{3}{2}}{\frac{x}{2} - 1}$$
$$= \frac{-1}{-\frac{1}{2}}$$