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1. Dik $f(2) = 10$
 $f(3) = 5$
 $f(4) = 15$

a. $f(x) = ax^2 + bx + c$

$$f(2) = 4a + 2b + c = 10 \quad \dots (1)$$

$$f(3) = 9a + 3b + c = 5 \quad \dots (2)$$

$$f(4) = 16a + 4b + c = 15 \quad \dots (3)$$

Persamaan 1 - Persamaan 2

$$4a + 2b + c = 10$$

$$9a + 3b + c = 5$$

$$-5a - b = 5$$

$$5a + b = -5 \quad \dots (4)$$

Persamaan 1 - Persamaan 3

$$4a + 2b + c = 10$$

$$16a + 4b + c = 15$$

$$-12a - 2b = -5$$

$$12a + 2b = 10 \quad \dots (5)$$

Persamaan 4 - Persamaan 5

$$5a + b = -5$$

$$12a + 2b = 10$$

$$-7a = -15$$

$$a = 7,5$$

Masukkan konversi persamaan nilai a ke persamaan 4

$$5a + b = -5 \Rightarrow 5(7,5) + b = -5$$

$$b = -42,5$$

Masukkan nilai a dan b ke persamaan 1

$$4(7,5) + 2(-42,5) + c = 10$$

$$c = 10 + 55 = 65$$

Jadi, nilai $a = 7,5$; $b = -42,5$; dan $c = 65$

$$f(x) = 7,5x^2 - 42,5x + 65$$

b. $\frac{d}{dx} f(x) = 0 \Rightarrow 2ax + b = 0$

$$\bar{x} = -\frac{b}{2a} = -\frac{-42,5}{2(7,5)} = \frac{42,5}{15} = 2,833$$

Jadi, untuk $f(x)$ minimum nilai x nya adalah 2,833