Решение задачи

1) При x = x1 f(x1) = q(x1) = a0, т. е. a0 = f(x1) = 5;

2) При x = x2 f(x2) = q(x2) = f(x1) + a1(x2 – x1).

Тогда $a1 = \dfrac{f(x2) - f(x1)}{x2 - x1} = \dfrac{-3-5}{0-(-2)} = -4$;

3) При x = x3 f(x3) = q(x3) = $f(x1) + \dfrac{(f(x2) - f(x1))(x3 - x1)}{x2 - x1} + a2(x3 - x1)(x3 - x2)$.

Тогда

$$a2 = \frac{1}{x3 - x2}\left(\frac{f(x3) - f(x1)}{x3 - x1} - \frac{f(x2) - f(x1)}{x2 - x1}\right) = \frac{1}{2-0}\left(\frac{-3-5}{2-(-2)} - \frac{-3-5}{0-(-2)}\right) = 1$$

Для стационарной точки функции q(x) $\dfrac{dq(x)}{dx} = a1 + 2a2x - a2x1 - a2x2 = 0$.

Откуда $\bar{x} = \dfrac{x2 + x1}{2} - \dfrac{a1}{2a2} = \dfrac{0 + (-2)}{2} - \dfrac{-4}{2*1} = 1$.