

3.97
54

$$p(-2) = -6 = 16 - 8a + 4b - 2c = 4 \rightarrow c = 9 - 4a + 2b$$

$$p(-1) = 0 = 1 - a + b - c = 4 \rightarrow b = 3a - 12$$

$$p'(x) = 4x^3 + 3ax^2 + 2bx + c$$

$$p'(-1) = 0 = -4 + 3a - 2b + c \rightarrow a = 5, b = 3, c = -5$$

$$x^2 - x - 2 = (x-2)(x+1)$$

$$p(x) = (x-2)(x+1)q(x) + nx + p$$

$$p(2) = 54 = 2n + p$$

$$p(-1) = 0 = n - p$$

$$n = 18$$

$$p = 18$$

x=1, x=2

$$18x + 18$$