

3.55  
13

$$p(-2) = 0 = 16 - 8a + 4b - 64c \rightarrow \boxed{48 = -8a + 4b + c} \quad (1)$$

$$p'(-2) = 0$$

$$p(x) = 4x^3 + 3ax^2 + 2bx + 32$$

$$p'(-2) = 0 = -32 + 12a - 4b + 32$$

$$\boxed{b = 3a}$$

$$p(-1) = 1 = 1 - a + b - 32 + c$$

$$\boxed{c = 32 - 2a}$$

$$48 = -8a + 12a + 32 - 2a$$

$$a = 8, \quad b = 24, \quad c = 16$$