

3.90  
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$$p(0), p(1)=4, p(-1)=2, p(2)=3, p(3)=4$$

$$p(x) = x(x^2 - 2x - 3)Q(x) + ax^2 + bx + c$$

$$p(x) = x(x-3)(x+1)Q(x) + ax^2 + bx + c$$

$$p(0) = 0 + c = 1 \rightarrow \boxed{c=1}$$

$$p(3) = 4 = 9a + 3b + c \rightarrow b = -3a + 1$$

$$p(-1) = 2 = 0 + a - b + c$$

$$2 = a + 3a - 1 + 1 \rightarrow a = \frac{1}{2}, b = -\frac{1}{2}$$

$$\frac{1}{2}x^2 - \frac{1}{2}x + 1$$