Real01 Answers for No.9363

$$Ans1 = [a = 0, b = 3, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 5x + 3] & .2 = [p(x) - q(x) = -2x^2 - 5x - 5] \\ .3 = [q(x) - p(x) = 2x^2 + 5x + 5] & .4 = [mp(x) - nq(x) = -11x^2 - 25x - 24] \\ .5 = [p(x)\,q(x) = 3x^4 + 5x^3 + x^2 - 5x - 4] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 4x^5 - 9x^4 - 18x^3 - 4x^2 - 8x - 12]$$

$$Ans4 = [a + b = 8, a\,b = 7], \quad , \quad Ans5 = [a = 2, b = 4, a\,b = 8]$$

$$Ans6 = [P(x) = x^4 - 2x^3 + x^2 + 4x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 - 4x^2 - 2x - 1 \\ R(x) = x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 4x - 2 \\ R(x) = -x^2 + x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 3x - 7 \\ R(x) = 18 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 6x \\ R(x) = 12x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9435

$$Ans1 = [a = -1, b = -4, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 4x^2 + 3x - 2] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -2x^2 - 3x - 4] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 2x^2 + 3x + 4] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -7x^2 - 9x - 9] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 3x^4 + 3x^3 - 8x^2 - 9x - 3] & .6 = [[\mathrm{p}(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 + 6x^5 + 2x^4 + 4x^3 + 20x^2 - 16x - 8]$$

$$Ans4 = [a + b = -12, a\,b = 35], \quad , \quad Ans5 = [a = -7, b = 6, a\,b = -42]$$

$$Ans6 = [\mathrm{P}(x) = x^4 + x^3 + 6x^2 + 11x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 - 4x + 3 \\ \mathrm{R}(x) = x - 4 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 3x^2 - 4 \\ \mathrm{R}(x) = 3x^2 + x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 5x - 6 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 5x^2 + 15x + 46 \\ \mathrm{R}(x) = 142 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 2x^3 + 4x \\ \mathrm{R}(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 4 \\ \mathrm{R}(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9484

$$Ans1 = [\,a = -3,\ b = -3,\ c = 1\,]$$

$$Ans2 = \begin{bmatrix} .1 = [\,p(x) + q(x) = 5x^2 + 3x - 1\,] & .2 = [\,p(x) - q(x) = -3x^2 - 3x + 5\,] \\ .3 = [\,q(x) - p(x) = 3x^2 + 3x - 5\,] & .4 = [\,mp(x) - nq(x) = -5x^2 - 6x + 12\,] \\ .5 = [\,p(x)\,q(x) = 4x^4 + 3x^3 + 5x^2 + 6x - 6\,] & .6 = [\,[p(x)]^2 = x^4 + 4x^2 + 4\,] \end{bmatrix}$$

$$Ans3 = [\,p(x)\,q(x) = x^5 - 6x^4 - x^3 + 29x^2 - 42x + 15\,]$$

$$Ans4 = [\,a + b = 4,\ a\,b = -21\,], \quad , \quad Ans5 = [\,a = -6,\ b = 4,\ a\,b = -24\,]$$

$$Ans6 = [\,P(x) = x^4 - 7x^3 - x^2 + 9x - 3\,]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - x^3 + 2x^2 - 4x + 4 \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 1 \\ R(x) = 2x^3 - 4x^2 + 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 8x + 23 \\ R(x) = -70 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 2x \\ R(x) = 2x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 7 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9503

$$Ans1 = [a = 3, b = -2, c = -3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 4x + 6] & .2 = [p(x) - q(x) = -x^2 - 4x] \\ .3 = [q(x) - p(x) = x^2 + 4x] & .4 = [mp(x) - nq(x) = -8x^2 - 20x - 9] \\ .5 = [p(x)\,q(x) = 2x^4 + 4x^3 + 9x^2 + 12x + 9] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 7x^4 + 6x^3 + 20x^2 - 8x - 12]$$

$$Ans4 = [a + b = 9, a\,b = 14], \quad , \quad Ans5 = [a = -2, b = 7, a\,b = -14]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - x^2 - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - 2x^3 - x^2 + 2x \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 2x - 1 \\ R(x) = 2x^2 + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 + 7x + 13 \\ R(x) = 25 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9630

$$Ans1 = [a = -1, b = -2, c = 3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 4x + 3] & .2 = [p(x) - q(x) = -x^2 - 4x + 1] \\ .3 = [q(x) - p(x) = x^2 + 4x - 1] & .4 = [mp(x) - nq(x) = -4x^2 - 12x + 1] \\ .5 = [p(x)\,q(x) = 2x^4 + 4x^3 + 5x^2 + 8x + 2] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 3x^5 + 5x^4 + 5x^3 - 12x^2 + 16x + 15]$$

$$Ans4 = [a + b = -3, a\,b = -40], \quad , \quad Ans5 = [a = -2, b = 5, a\,b = -10]$$

$$Ans6 = [P(x) = x^4 + 4x^3 - 3x^2 - 6x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - 2x^3 + 2x^2 + 4 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 2x + 2 \\ R(x) = 4x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 18x + 38 \\ R(x) = 71 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9647

$$Ans1 = [a = -3, b = -1, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 2x - 2] & .2 = [p(x) - q(x) = -x^2 + 2x - 4] \\ .3 = [q(x) - p(x) = x^2 - 2x + 4] & .4 = [mp(x) - nq(x) = -x^2 + 6x - 18] \\ .5 = [p(x)\,q(x) = 2x^4 - 2x^3 - 5x^2 + 6x - 3] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 3x^4 - 14x^3 - 18x^2 - 4x - 8]$$

$$Ans4 = [a + b = 15, a\,b = 56], \quad , \quad Ans5 = [a = -1, b = 7, a\,b = -7]$$

$$Ans6 = [P(x) = x^4 + 3x^3 + 2x^2 + 8x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 - x^3 + 2x^2 - x + 3 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x - 1 \\ R(x) = 2x^3 - x^2 + 3x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 2x + 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 5x + 16 \\ R(x) = -52 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9779

$$Ans1 = [a = 3, b = -3, c = 3]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 4x^2 + 3x - 3] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -2x^2 - 3x - 1] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 2x^2 + 3x + 1] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -11x^2 - 15x - 3] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 3x^4 + 3x^3 - 7x^2 - 6x + 2] & .6 = [[\mathrm{p}(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - 3x^5 - 2x^4 + 4x^3 - 14x^2 - 2x + 4]$$

$$Ans4 = [a + b = 9, a\,b = 8], \quad , \quad Ans5 = [a = 6, b = 1, a\,b = 6]$$

$$Ans6 = [\mathrm{P}(x) = x^4 - x^3 + 5x^2 + x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 3x^4 + 2x^3 + x^2 - 4x \\ \mathrm{R}(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 3x + 2 \\ \mathrm{R}(x) = x^3 - 4x^2 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -6x + 5 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 4x^2 + 12x + 36 \\ \mathrm{R}(x) = 109 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 - 3x \\ \mathrm{R}(x) = 3x - 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 \\ \mathrm{R}(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10293

$$Ans1 = [a = 0, b = -4, c = 3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x + 3] & .2 = [p(x) - q(x) = -x^2 + 3x - 1] \\ .3 = [q(x) - p(x) = x^2 - 3x + 1] & .4 = [mp(x) - nq(x) = x^2 + 6x + 1] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 + 4x^2 - 3x + 2] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 6x^5 + 13x^4 + 20x^3 - 4x^2 - 8x - 20]$$

$$Ans4 = [a + b = -15, a\,b = 54], \quad , \quad Ans5 = [a = 5, b = 6, a\,b = 30]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 5x^2 - 5x - 4]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 + 3x^2 \\ R(x) = -2x - 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x + 3 \\ R(x) = -2x - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 14x + 26 \\ R(x) = 56 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10311

$$Ans1 = [a = -4, b = -4, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 3x + 9] & .2 = [p(x) - q(x) = -3x^2 + 3x + 1] \\ .3 = [q(x) - p(x) = 3x^2 - 3x - 1] & .4 = [mp(x) - nq(x) = -18x^2 + 15x - 10] \\ .5 = [p(x)\,q(x) = 4x^4 - 3x^3 + 24x^2 - 15x + 20] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 6x^5 - 5x^4 + 6x^3 + 34x^2 - 42x + 10]$$

$$Ans4 = [a + b = -7, a\,b = -8], \quad , \quad Ans5 = [a = -4, b = 2, a\,b = -8]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 7x^2 - 10x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 4x^3 - 4x^2 + 3x + 2 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 4 \\ R(x) = -4x^3 + 3x^2 + 2x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 18x + 53 \\ R(x) = 163 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10438

$$Ans1 = [a = -2, b = 0, c = 5]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 4x + 3] & .2 = [p(x) - q(x) = -2x^2 + 4x - 1] \\ .3 = [q(x) - p(x) = 2x^2 - 4x + 1] & .4 = [mp(x) - nq(x) = -11x^2 + 20x - 6] \\ .5 = [p(x)\,q(x) = 3x^4 - 4x^3 + 5x^2 - 4x + 2] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 6x^5 - 11x^4 - 36x^3 + 34x^2 + 24x - 20]$$

$$Ans4 = [a + b = 10, a\,b = 21], \quad , \quad Ans5 = [a = 7, b = 5, a\,b = 35]$$

$$Ans6 = [P(x) = x^4 - 6x^3 + 3x^2 - 15x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + x^2 - 3x - 1 \\ R(x) = -2x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 1 \\ R(x) = -3x^3 - x^2 - 2x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 12x + 24 \\ R(x) = 44 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 6x \\ R(x) = 12x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11352

$$Ans1 = [a = 3, b = 2, c = -1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 5x - 2] & .2 = [p(x) - q(x) = -x^2 - 5x - 4] \\ .3 = [q(x) - p(x) = x^2 + 5x + 4] & .4 = [mp(x) - nq(x) = -x^2 - 10x - 11] \\ .5 = [p(x)\, q(x) = 2x^4 + 5x^3 - 5x^2 - 15x - 3] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^6 + 9x^5 + 16x^4 - 12x^3 + 3x^2 + 9x - 6]$$

$$Ans4 = [a + b = -5, a\,b = -36], \quad , \quad Ans5 = [a = -5, b = 7, a\,b = -35]$$

$$Ans6 = [P(x) = x^4 - 4x^3 + 6x^2 - 20x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 + x^2 - x + 2 \\ R(x) = -3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x + 1 \\ R(x) = -x^3 + 2x^2 - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x + 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 + 6x + 9 \\ R(x) = 20 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 2x \\ R(x) = 2x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11778

$$Ans1 = [a = -1, b = 2, c = 5]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + x - 4] & .2 = [p(x) - q(x) = -x^2 - x + 6] \\ .3 = [q(x) - p(x) = x^2 + x - 6] & .4 = [mp(x) - nq(x) = -7x^2 - 5x + 28] \\ .5 = [p(x)\,q(x) = 2x^4 + x^3 - 3x^2 + x - 5] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 10x^5 + 22x^4 - 12x^3 - 2x^2 - 8x + 4]$$

$$Ans4 = [a + b = 4, a\,b = -45], \quad , \quad Ans5 = [a = 6, b = 2, a\,b = 12]$$

$$Ans6 = [P(x) = x^4 - x^3 + 7x^2 - 2x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 - 2x^2 + 2x - 1 \\ R(x) = 4x - 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - 2x + 2 \\ R(x) = -x^2 + 4x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 6x + 20 \\ R(x) = -59 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 23 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12403

$$Ans1 = [a = -3, b = 3, c = -2]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - x - 7] & .2 = [p(x) - q(x) = -2x^2 + x - 3] \\ .3 = [q(x) - p(x) = 2x^2 - x + 3] & .4 = [mp(x) - nq(x) = -4x^2 + 3x - 19] \\ .5 = [p(x)\,q(x) = 3x^4 - x^3 - 17x^2 + 5x + 10] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 - 10x^3 + 13x^2 + 10x - 10]$$

$$Ans4 = [a + b = -1, a\,b = -30], \quad , \quad Ans5 = [a = 7, b = 3, a\,b = 21]$$

$$Ans6 = [P(x) = x^4 + 3x^3 - 2x^2 - 2x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 + 4x^3 - 3x^2 + x + 3 \\ R(x) = -3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 4 \\ R(x) = -3x^3 + x^2 + 3x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 19x + 60 \\ R(x) = 177 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 4x \\ R(x) = 4x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12456

$$Ans1 = [a = -1, b = -4, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 5x - 7] & .2 = [p(x) - q(x) = -2x^2 - 5x - 3] \\ .3 = [q(x) - p(x) = 2x^2 + 5x + 3] & .4 = [mp(x) - nq(x) = -x^2 - 10x - 21] \\ .5 = [p(x)\,q(x) = 3x^4 + 5x^3 - 17x^2 - 25x + 10] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 2x^5 - 3x^4 - 10x^3 + 3x^2 + 12x + 15]$$

$$Ans4 = [a + b = 2, a\,b = -8], \quad , \quad Ans5 = [a = -7, b = 5, a\,b = -35]$$

$$Ans6 = [P(x) = x^4 - 3x^3 - x^2 + 7x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + 3x^2 - 2x - 2 \\ R(x) = -4x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 + 3x - 2 \\ R(x) = -2x^2 - 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 27x + 85 \\ R(x) = 253 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12545

$$Ans1 = [a = -1, b = -4, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 2x + 4] & .2 = [p(x) - q(x) = -3x^2 + 2x + 6] \\ .3 = [q(x) - p(x) = 3x^2 - 2x - 6] & .4 = [mp(x) - nq(x) = -10x^2 + 6x + 13] \\ .5 = [p(x)\,q(x) = 4x^4 - 2x^3 + 19x^2 - 10x - 5] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 + 7x^4 - 4x^3 + 15x^2 - 10x + 25]$$

$$Ans4 = [a + b = -8, a\,b = 7], \quad , \quad Ans5 = [a = 4, b = 5, a\,b = 20]$$

$$Ans6 = [P(x) = x^4 - 7x^3 + x^2 - 5x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 + 4x^2 + 3x + 3 \\ R(x) = -3x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x + 4 \\ R(x) = 3x^3 + 3x^2 - 3x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 \\ R(x) = 4 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12583

$$Ans1 = [a = -5, b = 3, c = -3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 4x + 9] & .2 = [p(x) - q(x) = -3x^2 + 4x - 1] \\ .3 = [q(x) - p(x) = 3x^2 - 4x + 1] & .4 = [mp(x) - nq(x) = -3x^2 + 8x + 10] \\ .5 = [p(x)\,q(x) = 4x^4 - 4x^3 + 21x^2 - 16x + 20] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 8x^4 + 13x^3 - 6x^2 + 24x - 18]$$

$$Ans4 = [a + b = -4, a\,b = -12], \quad , \quad Ans5 = [a = 4, b = 5, a\,b = 20]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 3x^2 - x - 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - 3x^3 + 2x - 1 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 3x \\ R(x) = 2x^2 - x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 3 \\ R(x) = 4 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12589

$$Ans1 = [a = 2, b = 1, c = 3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 4x - 5] & .2 = [p(x) - q(x) = -x^2 - 4x + 1] \\ .3 = [q(x) - p(x) = x^2 + 4x - 1] & .4 = [mp(x) - nq(x) = -7x^2 - 20x + 9] \\ .5 = [p(x)\,q(x) = 2x^4 + 4x^3 - 7x^2 - 8x + 6] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 4x^5 - 5x^4 - 8x^3 + 8x^2 + 8x - 6]$$

$$Ans4 = [a + b = -3, a\,b = -4], \quad , \quad Ans5 = [a = -2, b = 6, a\,b = -12]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 7x^2 - 9x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 + x^3 + 4x^2 + x \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x + 1 \\ R(x) = 4x^3 + x^2 - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x^2 + 9x - 27 \\ R(x) = 79 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 8 \\ R(x) = 27 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12596

$$Ans1 = [a = -1, b = -4, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 3x + 3] & .2 = [p(x) - q(x) = -3x^2 + 3x + 7] \\ .3 = [q(x) - p(x) = 3x^2 - 3x - 7] & .4 = [mp(x) - nq(x) = -13x^2 + 12x + 23] \\ .5 = [p(x)\,q(x) = 4x^4 - 3x^3 + 18x^2 - 15x - 10] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - x^5 - 8x^4 - 4x^3 - 5x^2 + 15x + 10]$$

$$Ans4 = [a + b = 10, a\,b = 16], \quad , \quad Ans5 = [a = 1, b = 4, a\,b = 4]$$

$$Ans6 = [P(x) = x^4 + 4x^3 - 6x^2 - 19x + 6]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 3x^3 + 4x^2 + 4x - 1 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 3 \\ R(x) = 4x^3 + 4x^2 - x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 3 \\ R(x) = -11 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12620

$$Ans1 = [a = -3, b = -4, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 3x - 6] & .2 = [p(x) - q(x) = -3x^2 + 3x + 2] \\ .3 = [q(x) - p(x) = 3x^2 - 3x - 2] & .4 = [mp(x) - nq(x) = -8x^2 + 9x + 4] \\ .5 = [p(x)\,q(x) = 4x^4 - 3x^3 - 12x^2 + 6x + 8] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 10x^4 + 20x^3 - 27x^2 - 10x + 10]$$

$$Ans4 = [a + b = -1, a\,b = -6], \quad , \quad Ans5 = [a = -6, b = 3, a\,b = -18]$$

$$Ans6 = [P(x) = x^4 - 7x^3 - 5x^2 + 40x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 + 3x^3 + 2x^2 + 3x + 2 \\ R(x) = -2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 3 \\ R(x) = 2x^3 + 3x^2 + 2x - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 13x + 29 \\ R(x) = 56 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 16 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12651

$$Ans1 = [a = -1, b = -1, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 4x + 2] & .2 = [p(x) - q(x) = -2x^2 + 4x + 8] \\ .3 = [q(x) - p(x) = 2x^2 - 4x - 8] & .4 = [mp(x) - nq(x) = -9x^2 + 16x + 27] \\ .5 = [p(x)\, q(x) = 3x^4 - 4x^3 + 12x^2 - 20x - 15] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^6 - 4x^5 - x^4 + 10x^3 + 4x^2 - 8x - 20]$$

$$Ans4 = [a + b = -2, a\, b = -8], \quad , \quad Ans5 = [a = 7, b = 6, a\, b = 42]$$

$$Ans6 = [P(x) = x^4 - 5x^3 + 6x^2 - 28x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 4x^3 + 3 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - 4x \\ R(x) = 3x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x - 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 16x + 33 \\ R(x) = 70 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 12x \\ R(x) = 36x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12675

$$Ans1 = [a = 5, b = 4, c = -2]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 3x^2 + x + 2] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -x^2 - x + 8] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = x^2 + x - 8] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -5x^2 - 4x + 27] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 2x^4 + x^3 + 7x^2 + 5x - 15] & .6 = [[\mathrm{p}(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - 2x^5 + x^4 + 10x^3 - 28x^2 - 4x + 12]$$

$$Ans4 = [a + b = -13, a\,b = 36], \quad , \quad Ans5 = [a = -2, b = 6, a\,b = -12]$$

$$Ans6 = [\mathrm{P}(x) = x^4 + 7x^3 - 3x^2 - 19x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 3x^4 + 4x^3 + 3x^2 \\ \mathrm{R}(x) = -2 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 3x + 4 \\ \mathrm{R}(x) = 3x^3 - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -3x - 1 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 - 2x^2 + 10x - 34 \\ \mathrm{R}(x) = 101 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 2x^3 + 6x \\ \mathrm{R}(x) = 18x - 3 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 8 \\ \mathrm{R}(x) = 27 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12684

$$Ans1 = [a = 1, b = -2, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 5x - 4] & .2 = [p(x) - q(x) = -x^2 - 5x - 2] \\ .3 = [q(x) - p(x) = x^2 + 5x + 2] & .4 = [mp(x) - nq(x) = -8x^2 - 25x - 1] \\ .5 = [p(x)\,q(x) = 2x^4 + 5x^3 - 7x^2 - 15x + 3] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 5x^4 + 11x^3 - 28x^2 + 20x + 10]$$

$$Ans4 = [a + b = 3, a\,b = -18], \quad , \quad Ans5 = [a = -5, b = 3, a\,b = -15]$$

$$Ans6 = [P(x) = x^4 + 6x^3 + 5x^2 + 35x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 - 3x - 1 \\ R(x) = -4x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 3 \\ R(x) = -x^2 - 4x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 27x + 81 \\ R(x) = 246 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 18 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12693

$$Ans1 = [a = 3, b = -1, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 3x - 3] & .2 = [p(x) - q(x) = -3x^2 - 3x - 5] \\ .3 = [q(x) - p(x) = 3x^2 + 3x + 5] & .4 = [mp(x) - nq(x) = -13x^2 - 12x - 16] \\ .5 = [p(x)\,q(x) = 4x^4 + 3x^3 - 15x^2 - 12x - 4] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 4x^4 - 16x^3 + 26x^2 + 4x - 8]$$

$$Ans4 = [a + b = -8, a\,b = -9], \quad , \quad Ans5 = [a = -2, b = 1, a\,b = -2]$$

$$Ans6 = [P(x) = x^4 + 6x^3 - x^2 - 4x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 + 4x^2 - 1 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 + 4 \\ R(x) = -x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 17x + 54 \\ R(x) = 165 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12705

$$Ans1 = [a = -1, b = 0, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - x - 4] & .2 = [p(x) - q(x) = -3x^2 + x + 2] \\ .3 = [q(x) - p(x) = 3x^2 - x - 2] & .4 = [mp(x) - nq(x) = -16x^2 + 5x + 11] \\ .5 = [p(x)\,q(x) = 4x^4 - x^3 - 7x^2 + x + 3] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 6x^5 - 5x^4 + 18x^3 + 9x^2 - 18x - 6]$$

$$Ans4 = [a + b = -2, a\,b = -24], \quad , \quad Ans5 = [a = 3, b = 5, a\,b = 15]$$

$$Ans6 = [P(x) = x^4 - 2x^3 + 7x^2 - 9x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - x^3 - 3x^2 - 4 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - x - 3 \\ R(x) = -4x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 10x + 20 \\ R(x) = 36 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12708

$$Ans1 = [a = 4, b = -2, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x + 8] & .2 = [p(x) - q(x) = -x^2 + 3x + 2] \\ .3 = [q(x) - p(x) = x^2 - 3x - 2] & .4 = [mp(x) - nq(x) = x^2 + 6x + 19] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 + 13x^2 - 15x + 15] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 2x^5 - 3x^4 + 6x^3 + 16x^2 - 10x - 12]$$

$$Ans4 = [a + b = 13, a\,b = 40], \quad , \quad Ans5 = [a = 5, b = 4, a\,b = 20]$$

$$Ans6 = [P(x) = x^4 + 6x^3 - 2x^2 - 8x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 - 3x^2 + 4x + 4 \\ R(x) = -3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - 3x + 4 \\ R(x) = 4x^2 - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x^2 + 3x - 7 \\ R(x) = 19 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 2x \\ R(x) = 2x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 17 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12709

$$Ans1 = [a = -3, b = -5, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x + 7] & .2 = [p(x) - q(x) = -x^2 + 3x + 1] \\ .3 = [q(x) - p(x) = x^2 - 3x - 1] & .4 = [mp(x) - nq(x) = -7x^2 + 15x - 3] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 + 11x^2 - 12x + 12] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 + 2x^4 + 3x^3 - x^2 - 4x + 10]$$

$$Ans4 = [a + b = -3, a\,b = -4], \quad , \quad Ans5 = [a = 6, b = 5, a\,b = 30]$$

$$Ans6 = [P(x) = x^4 - 7x^3 + 5x^2 - 30x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 - 2x^2 - 4x - 3 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x - 2 \\ R(x) = -4x^3 - 3x^2 + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 4x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 9x + 29 \\ R(x) = 86 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12718

$$Ans1 = [a = 1, b = 2, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 4x + 2] & .2 = [p(x) - q(x) = -2x^2 - 4x - 8] \\ .3 = [q(x) - p(x) = 2x^2 + 4x + 8] & .4 = [mp(x) - nq(x) = -13x^2 - 20x - 31] \\ .5 = [p(x)\,q(x) = 3x^4 + 4x^3 - 4x^2 - 12x - 15] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 5x^4 + 12x^3 + 14x^2 - 8x - 24]$$

$$Ans4 = [a + b = -5, a\,b = -6], \quad , \quad Ans5 = [a = 5, b = 7, a\,b = 35]$$

$$Ans6 = [P(x) = x^4 - 5x^3 - 3x^2 + 18x + 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 - 4x - 4 \\ R(x) = 4x - 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 - 4 \\ R(x) = -4x^2 + 4x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 6x + 14 \\ R(x) = -39 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

Real01 Answers for No.12720

$$Ans1 = [a = 4, b = 0, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - x + 3] & .2 = [p(x) - q(x) = -x^2 + x + 1] \\ .3 = [q(x) - p(x) = x^2 - x - 1] & .4 = [mp(x) - nq(x) = -2x^2 + 3x + 5] \\ .5 = [p(x)\,q(x) = 2x^4 - x^3 + 5x^2 - 2x + 2] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 2x^4 - 27x^3 + 10x^2 - 12x + 6]$$

$$Ans4 = [a + b = 10, a\,b = 9], \quad , \quad Ans5 = [a = -4, b = 2, a\,b = -8]$$

$$Ans6 = [P(x) = x^4 - x^3 + 3x^2 - x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 - 4x^3 - 4x^2 + 1 \\ R(x) = -3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 - 4x - 4 \\ R(x) = x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 14x + 41 \\ R(x) = 122 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 6x \\ R(x) = 18x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 20 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12726

$$Ans1 = [a = -3, b = 4, c = -1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 4x + 10] & .2 = [p(x) - q(x) = -x^2 - 4x] \\ .3 = [q(x) - p(x) = x^2 + 4x] & .4 = [mp(x) - nq(x) = -8x^2 - 20x - 15] \\ .5 = [p(x)\,q(x) = 2x^4 + 4x^3 + 15x^2 + 20x + 25] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 8x^5 + 13x^4 + 10x^3 + 6x^2 - 18x - 12]$$

$$Ans4 = [a + b = 1, a\,b = -12], \quad , \quad Ans5 = [a = 4, b = 5, a\,b = 20]$$

$$Ans6 = [P(x) = x^4 + 5x^3 - 6x^2 - 27x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 - 2x^2 + 3x - 2 \\ R(x) = 2x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x - 2 \\ R(x) = 3x^3 - 2x^2 + 2x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 + 2x - 7 \\ R(x) = 11 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -1 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12758

$$Ans1 = [a = 0, b = 1, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 3x - 3] & .2 = [p(x) - q(x) = -2x^2 + 3x - 1] \\ .3 = [q(x) - p(x) = 2x^2 - 3x + 1] & .4 = [mp(x) - nq(x) = -3x^2 + 6x - 4] \\ .5 = [p(x)\,q(x) = 3x^4 - 3x^3 - 7x^2 + 6x + 2] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 3x^5 - 6x^4 + 5x^3 - 9x^2 - 48x - 36]$$

$$Ans4 = [a + b = -2, a\,b = -3], \quad , \quad Ans5 = [a = -3, b = 4, a\,b = -12]$$

$$Ans6 = [P(x) = x^4 - 4x^3 - 5x^2 + 23x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 + 3x^2 + x + 1 \\ R(x) = -2x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x + 3 \\ R(x) = x^3 + x^2 - 2x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -6 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 2x \\ R(x) = 2x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 23 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13127

$$Ans1 = [a = 3, b = 4, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - x + 6] & .2 = [p(x) - q(x) = -3x^2 + x + 4] \\ .3 = [q(x) - p(x) = 3x^2 - x - 4] & .4 = [mp(x) - nq(x) = -3x^2 + 2x + 23] \\ .5 = [p(x)\,q(x) = 4x^4 - x^3 + 21x^2 - 5x + 5] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 7x^4 + 6x^3 - 14x^2 - 30x + 24]$$

$$Ans4 = [a + b = 7, a\,b = 6], \quad , \quad Ans5 = [a = -2, b = 4, a\,b = -8]$$

$$Ans6 = [P(x) = x^4 + x^3 + 6x^2 + 9x - 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - x^3 + 4 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x - 1 \\ R(x) = 4x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x + 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 23x + 67 \\ R(x) = 199 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 4x \\ R(x) = 4x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13628

$$Ans1 = [a = 3, b = 2, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 4x + 1] & .2 = [p(x) - q(x) = -3x^2 - 4x + 3] \\ .3 = [q(x) - p(x) = 3x^2 + 4x - 3] & .4 = [mp(x) - nq(x) = -10x^2 - 12x + 7] \\ .5 = [p(x)\,q(x) = 4x^4 + 4x^3 + 7x^2 + 8x - 2] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 + 2x^4 - 9x^3 - 21x^2 - 18x - 30]$$

$$Ans4 = [a + b = -1, a\,b = -30], \quad , \quad Ans5 = [a = 5, b = 4, a\,b = 20]$$

$$Ans6 = [P(x) = x^4 - 5x^3 - x^2 + 8x - 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + x^2 + x + 2 \\ R(x) = -2x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 + x + 1 \\ R(x) = 2x^2 - 2x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x - 12 \\ R(x) = 40 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13652

$$Ans1 = [a = 1, b = 1, c = 2]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x + 6] & .2 = [p(x) - q(x) = -3x^2 + 5x - 4] \\ .3 = [q(x) - p(x) = 3x^2 - 5x + 4] & .4 = [mp(x) - nq(x) = -10x^2 + 15x - 13] \\ .5 = [p(x)\,q(x) = 4x^4 - 5x^3 + 9x^2 - 5x + 5] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 3x^4 - 10x^3 + 20x^2 + 10x - 25]$$

$$Ans4 = [a + b = 10, a\,b = 16], \quad Ans5 = [a = 6, b = 4, a\,b = 24]$$

$$Ans6 = [P(x) = x^4 + 4x^3 + 2x^2 + 10x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 + 3x^2 - 2x \\ R(x) = x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 + 3x - 2 \\ R(x) = x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 8x + 15 \\ R(x) = 29 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 5 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13707

$$Ans1 = [a = 3, b = -2, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 5x + 6] & .2 = [p(x) - q(x) = -3x^2 - 5x - 2] \\ .3 = [q(x) - p(x) = 3x^2 + 5x + 2] & .4 = [mp(x) - nq(x) = -16x^2 - 25x - 12] \\ .5 = [p(x)\,q(x) = 4x^4 + 5x^3 + 12x^2 + 10x + 8] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 + 2x^3 - 9x^2 - 30x - 12]$$

$$Ans4 = [a + b = 7, a\,b = 12], \quad , \quad Ans5 = [a = -1, b = 5, a\,b = -5]$$

$$Ans6 = [P(x) = x^4 - 5x^3 - 4x^2 + 22x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 + 2x^3 + 2x^2 - 3x + 1 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x + 2 \\ R(x) = 2x^3 - 3x^2 + x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 2 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 - 1 \\ R(x) = 6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644201

$$Ans1 = [a = \text{-}2, b = 0, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 5x^2 - x - 2] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -3x^2 + x + 8] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 3x^2 - x - 8] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -13x^2 + 4x + 29] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 4x^4 - x^3 + 7x^2 - 3x - 15] & .6 = [[\mathrm{p}(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^5 - 3x^4 + x^3 - 19x^2 - 8x + 16]$$

$$Ans4 = [a + b = \text{-}9, a\,b = 14], \quad , \quad Ans5 = [a = \text{-}5, b = 6, a\,b = \text{-}30]$$

$$Ans6 = [\mathrm{P}(x) = x^4 - 4x^3 - 3x^2 + 16x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + x^2 - 4x - 4 \\ \mathrm{R}(x) = -3x - 1 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = x + 1 \\ \mathrm{R}(x) = -4x^3 - 4x^2 - 3x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 6x - 2 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 6x^2 + 14x + 24 \\ \mathrm{R}(x) = 45 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 - 3x \\ \mathrm{R}(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 6 \\ \mathrm{R}(x) = 3 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644202

$$Ans1 = [a = -1, b = -3, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - x + 6] & .2 = [p(x) - q(x) = -x^2 + x + 2] \\ .3 = [q(x) - p(x) = x^2 - x - 2] & .4 = [mp(x) - nq(x) = -6x^2 + 5x + 6] \\ .5 = [p(x)\,q(x) = 2x^4 - x^3 + 10x^2 - 4x + 8] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 9x^4 + 22x^3 - 26x^2 + 6x - 8]$$

$$Ans4 = [a + b = 5, a\,b = -6], \quad , \quad Ans5 = [a = 4, b = 3, a\,b = 12]$$

$$Ans6 = [P(x) = x^4 - 6x^3 - 4x^2 + 26x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + 3x^2 - 4x \\ R(x) = 4x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 3 \\ R(x) = -4x^3 + 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 16x + 29 \\ R(x) = 60 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 6x \\ R(x) = 18x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644203

$$Ans1 = [a = 3, b = -5, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x + 2] & .2 = [p(x) - q(x) = -3x^2 + 5x - 8] \\ .3 = [q(x) - p(x) = 3x^2 - 5x + 8] & .4 = [mp(x) - nq(x) = -17x^2 + 25x - 34] \\ .5 = [p(x)\,q(x) = 4x^4 - 5x^3 - 7x^2 + 15x - 15] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 9x^5 + 16x^4 - 6x^3 - 5x^2 - 30x + 10]$$

$$Ans4 = [a + b = -4, a\,b = -5], \quad , \quad Ans5 = [a = 1, b = 3, a\,b = 3]$$

$$Ans6 = [P(x) = x^4 + x^3 - 5x^2 + x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 3x^2 + 4 \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - 3 \\ R(x) = 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 24x + 74 \\ R(x) = 226 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644204

$$Ans1 = [a = -2, b = 3, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - x + 1] & .2 = [p(x) - q(x) = -x^2 + x + 5] \\ .3 = [q(x) - p(x) = x^2 - x - 5] & .4 = [mp(x) - nq(x) = -4x^2 + 3x + 12] \\ .5 = [p(x)\,q(x) = 2x^4 - x^3 + 4x^2 - 3x - 6] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 11x^4 + 24x^3 - 41x^2 - 25x + 30]$$

$$Ans4 = [a + b = -3, a\,b = 2], \quad , \quad Ans5 = [a = 5, b = 3, a\,b = 15]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 3x^2 - x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - x^2 \\ R(x) = 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x \\ R(x) = -x^3 + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 11x + 30 \\ R(x) = 88 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644205

$$Ans1 = [a = -1, b = -2, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - x - 1] & .2 = [p(x) - q(x) = -x^2 + x + 3] \\ .3 = [q(x) - p(x) = x^2 - x - 3] & .4 = [mp(x) - nq(x) = -2x^2 + 3x + 10] \\ .5 = [p(x)\,q(x) = 2x^4 - x^3 - x - 2] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + x^5 - 12x^3 + 6x^2 + 18x + 36]$$

$$Ans4 = [a + b = -5, a\,b = -6], \quad , \quad Ans5 = [a = -2, b = 3, a\,b = -6]$$

$$Ans6 = [P(x) = x^4 - 3x^3 + 2x^2 - 2x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 - x^2 - 4x \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - x - 4 \\ R(x) = 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 + 6x + 8 \\ R(x) = 18 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644206

$$Ans1 = [a = 2, b = 4, c = 3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x + 2] & .2 = [p(x) - q(x) = -3x^2 + 5x] \\ .3 = [q(x) - p(x) = 3x^2 - 5x] & .4 = [mp(x) - nq(x) = -16x^2 + 25x - 1] \\ .5 = [p(x)\,q(x) = 4x^4 - 5x^3 + 5x^2 - 5x + 1] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 - 27x^3 - 17x^2 + 30x + 15]$$

$$Ans4 = [a + b = 11, a\,b = 28], \quad , \quad Ans5 = [a = -4, b = 2, a\,b = -8]$$

$$Ans6 = [P(x) = x^4 + 3x^3 + 6x^2 + 20x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 - x - 2 \\ R(x) = -x + 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 1 \\ R(x) = -2x^2 - x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 14x + 43 \\ R(x) = 130 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 9 \\ R(x) = 22 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644207

$$Ans1 = [a = -2, b = -1, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 2x + 2] & .2 = [p(x) - q(x) = -2x^2 - 2x - 8] \\ .3 = [q(x) - p(x) = 2x^2 + 2x + 8] & .4 = [mp(x) - nq(x) = -x^2 - 4x - 25] \\ .5 = [p(x)\, q(x) = 3x^4 + 2x^3 - 4x^2 - 6x - 15] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^6 + 4x^5 - 10x^4 + 12x^3 - 3x^2 + 6x - 6]$$

$$Ans4 = [a + b = -3, a\, b = -40], \quad , \quad Ans5 = [a = -6, b = 7, a\, b = -42]$$

$$Ans6 = [P(x) = x^4 - 4x^3 - 3x^2 + 14x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 + 4x^3 + x^2 + 4x - 3 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x + 4 \\ R(x) = x^3 + 4x^2 - 3x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - x \\ R(x) = 1 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = 3 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644208

$$Ans1 = [a = -2, b = -1, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 2x + 6] & .2 = [p(x) - q(x) = -2x^2 - 2x + 4] \\ .3 = [q(x) - p(x) = 2x^2 + 2x - 4] & .4 = [mp(x) - nq(x) = -3x^2 - 4x + 13] \\ .5 = [p(x)\, q(x) = 3x^4 + 2x^3 + 16x^2 + 10x + 5] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^6 + 6x^5 - 6x^4 + 3x^3 + 20x^2 - 6x - 12]$$

$$Ans4 = [a + b = 13, a\, b = 42], \quad , \quad Ans5 = [a = 4, b = 2, a\, b = 8]$$

$$Ans6 = [P(x) = x^4 - 5x^3 - 7x^2 + 40x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 - x^2 + 2x \\ R(x) = -4x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x - 1 \\ R(x) = 2x^3 - 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 17x + 37 \\ R(x) = 71 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644209

$$Ans1 = [a = 0, b = 0, c = \text{-}2]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 4x^2 + 2x - 1] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -2x^2 - 2x + 9] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 2x^2 + 2x - 9] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -5x^2 - 6x + 31] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 3x^4 + 2x^3 + 7x^2 + 8x - 20] & .6 = [[\mathrm{p}(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^5 - 6x^4 - 2x^3 - 14x^2 - 39x - 20]$$

$$Ans4 = [a + b = \text{-}5, a\,b = 4], \quad , \quad Ans5 = [a = 7, b = 5, a\,b = 35]$$

$$Ans6 = [\mathrm{P}(x) = x^4 - 3x^3 + 7x^2 - 19x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 2x^4 + 3x^3 - 4x^2 - x - 2 \\ \mathrm{R}(x) = 2 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 2x + 3 \\ \mathrm{R}(x) = -4x^3 - x^2 - 2x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = x - 3 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + x^2 + x - 4 \\ \mathrm{R}(x) = 11 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 + 9x \\ \mathrm{R}(x) = 27x - 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 \\ \mathrm{R}(x) = \text{-}5 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644210

$$Ans1 = [a = 1, b = -4, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 2x] & .2 = [p(x) - q(x) = -2x^2 - 2x + 4] \\ .3 = [q(x) - p(x) = 2x^2 + 2x - 4] & .4 = [mp(x) - nq(x) = -7x^2 - 8x + 18] \\ .5 = [p(x)\,q(x) = 3x^4 + 2x^3 + 4x^2 + 4x - 4] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 2x^4 - 3x^3 + 7x^2 - 4x - 15]$$

$$Ans4 = [a + b = 6, a\,b = -27], \quad , \quad Ans5 = [a = 1, b = 4, a\,b = 4]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 7x^2 - 11x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - x^3 + x^2 + 4x - 3 \\ R(x) = 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x - 1 \\ R(x) = x^3 + 4x^2 - 3x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 4x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 3x + 12 \\ R(x) = -39 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644211

$$Ans1 = [a = 2, b = 0, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x - 2] & .2 = [p(x) - q(x) = -3x^2 + 5x] \\ .3 = [q(x) - p(x) = 3x^2 - 5x] & .4 = [mp(x) - nq(x) = -10x^2 + 15x + 1] \\ .5 = [p(x)\,q(x) = 4x^4 - 5x^3 - 5x^2 + 5x + 1] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 6x^5 + 12x^3 - 10x^2 - 36x + 12]$$

$$Ans4 = [a + b = -13, a\,b = 36], \quad , \quad Ans5 = [a = 2, b = 1, a\,b = 2]$$

$$Ans6 = [P(x) = x^4 - 7x^3 + 3x^2 - 18x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - x^3 + 2x^2 - 4x + 2 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x - 1 \\ R(x) = 2x^3 - 4x^2 + 2x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 + 2x - 3 \\ R(x) = 5 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -7 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644212

$$Ans1 = [a = -3, b = 0, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 2x] & .2 = [p(x) - q(x) = -x^2 - 2x + 2] \\ .3 = [q(x) - p(x) = x^2 + 2x - 2] & .4 = [mp(x) - nq(x) = -x^2 - 6x + 8] \\ .5 = [p(x)\,q(x) = 2x^4 + 2x^3 + x^2 + 2x - 1] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 4x^4 - 10x^3 + 19x^2 + 12x - 18]$$

$$Ans4 = [a + b = -5, a\,b = -14], \quad , \quad Ans5 = [a = 7, b = 2, a\,b = 14]$$

$$Ans6 = [P(x) = x^4 + 7x^3 + x^2 + 9x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 - 2x^2 - 4 \\ R(x) = -2x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 2x \\ R(x) = -4x^2 - 2x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 14x + 40 \\ R(x) = 124 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644213

$$Ans1 = [a = 2, b = 0, c = 3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + x - 6] & .2 = [p(x) - q(x) = -3x^2 - x + 2] \\ .3 = [q(x) - p(x) = 3x^2 + x - 2] & .4 = [mp(x) - nq(x) = -7x^2 - 3x + 2] \\ .5 = [p(x)\,q(x) = 4x^4 + x^3 - 12x^2 - 2x + 8] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 - 2x^3 - 2x^2 - 36x - 36]$$

$$Ans4 = [a + b = 14, a\,b = 45], \quad , \quad Ans5 = [a = 2, b = 3, a\,b = 6]$$

$$Ans6 = [P(x) = x^4 - 2x^3 + 4x^2 - 2x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + 2 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x \\ R(x) = 2x^2 - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 4x - 12 \\ R(x) = 20 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 18 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644214

$$Ans1 = [a = 4, b = -3, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 2x - 10] & .2 = [p(x) - q(x) = -x^2 - 2x] \\ .3 = [q(x) - p(x) = x^2 + 2x] & .4 = [mp(x) - nq(x) = -2x^2 - 6x - 5] \\ .5 = [p(x)\, q(x) = 2x^4 + 2x^3 - 15x^2 - 10x + 25] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^6 + 2x^5 + 2x^4 + 8x^3 - 12x^2 - 8x + 8]$$

$$Ans4 = [a + b = -2, a\, b = -8], \quad , \quad Ans5 = [a = 2, b = 7, a\, b = 14]$$

$$Ans6 = [P(x) = x^4 + 2x^3 + 4x^2 + 12x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - 4x^3 - 3x^2 - x - 3 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 4x - 3 \\ R(x) = -x^2 - 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x + 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 25x + 74 \\ R(x) = 220 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644215

$$Ans1 = [a = 1, b = -3, c = -3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 2x + 5] & .2 = [p(x) - q(x) = -2x^2 + 2x + 1] \\ .3 = [q(x) - p(x) = 2x^2 - 2x - 1] & .4 = [mp(x) - nq(x) = -12x^2 + 10x - 1] \\ .5 = [p(x)\,q(x) = 3x^4 - 2x^3 + 11x^2 - 6x + 6] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 - 7x^3 + 9x^2 + 6x - 12]$$

$$Ans4 = [a + b = -6, a\,b = -7], \quad , \quad Ans5 = [a = 5, b = 4, a\,b = 20]$$

$$Ans6 = [P(x) = x^4 + 5x^3 - 6x^2 - 25x - 4]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 - 2x^2 - 4x + 4 \\ R(x) = -4x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 2x - 4 \\ R(x) = 4x^2 - 4x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 6x + 20 \\ R(x) = -57 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 5 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644216

$$Ans1 = [a = 3, b = 2, c = -3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + x - 7] & .2 = [p(x) - q(x) = -x^2 - x + 3] \\ .3 = [q(x) - p(x) = x^2 + x - 3] & .4 = [mp(x) - nq(x) = -7x^2 - 5x + 19] \\ .5 = [p(x)\,q(x) = 2x^4 + x^3 - 9x^2 - 2x + 10] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 2x^4 - 13x^3 - 2x^2 + 20x + 8]$$

$$Ans4 = [a + b = -2, a\,b = -15], \quad , \quad Ans5 = [a = 7, b = 4, a\,b = 28]$$

$$Ans6 = [P(x) = x^4 - 6x^3 + 4x^2 - 20x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 - 4x^2 + 3x \\ R(x) = -4x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x - 4 \\ R(x) = 3x^3 - 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 21x + 59 \\ R(x) = 181 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 2x \\ R(x) = 2x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644217

$$Ans1 = [a = 3, b = 0, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 4x - 7] & .2 = [p(x) - q(x) = -2x^2 - 4x - 1] \\ .3 = [q(x) - p(x) = 2x^2 + 4x + 1] & .4 = [mp(x) - nq(x) = -12x^2 - 20x + 3] \\ .5 = [p(x)\,q(x) = 3x^4 + 4x^3 - 15x^2 - 16x + 12] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 2x^4 - 8x^3 - 5x^2 + 25x - 15]$$

$$Ans4 = [a + b = 17, a\,b = 72], \quad , \quad Ans5 = [a = -6, b = 3, a\,b = -18]$$

$$Ans6 = [P(x) = x^4 - 2x^3 - x^2 + 6x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 2x^3 - 4x + 2 \\ R(x) = 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - 2x \\ R(x) = -4x^2 + 2x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 3x + 4 \\ R(x) = -7 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644218

$$Ans1 = [a = 1, b = -1, c = -3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - x + 2] & .2 = [p(x) - q(x) = -2x^2 + x + 6] \\ .3 = [q(x) - p(x) = 2x^2 - x - 6] & .4 = [mp(x) - nq(x) = -7x^2 + 3x + 14] \\ .5 = [p(x)\, q(x) = 3x^4 - x^3 + 10x^2 - 4x - 8] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^6 + x^5 - 23x^4 - 15x^3 + 2x^2 - 8x - 6]$$

$$Ans4 = [a + b = -3, a\, b = -54], \quad , \quad Ans5 = [a = -7, b = 2, a\, b = -14]$$

$$Ans6 = [P(x) = x^4 + 5x^3 + x^2 + 7x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 + x^3 + 2x^2 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x + 1 \\ R(x) = 2x^3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x^2 + 5x - 13 \\ R(x) = 42 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644219

$$Ans1 = [a = 1, b = -3, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 5x^2 + x - 5] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -3x^2 - x + 1] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 3x^2 + x - 1] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -5x^2 - 2x] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 4x^4 + x^3 - 11x^2 - 2x + 6] & .6 = [[\mathrm{p}(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - x^5 - 24x^4 - 16x^3 + 3x^2 - 15x - 12]$$

$$Ans4 = [a + b = -7, a\,b = 10], \quad , \quad Ans5 = [a = 2, b = 7, a\,b = 14]$$

$$Ans6 = [\mathrm{P}(x) = x^4 + 4x^3 + 5x^2 + 26x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 3x^4 + 2x^2 - x + 3 \\ \mathrm{R}(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 3x^2 + 2 \\ \mathrm{R}(x) = -x^2 + 3x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 2x - 1 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + x^2 - 6x + 18 \\ \mathrm{R}(x) = -53 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 + 12x \\ \mathrm{R}(x) = 36x - 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 1 \\ \mathrm{R}(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644220

$$Ans1 = [a = 0, b = -2, c = -4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + x + 8] & .2 = [p(x) - q(x) = -3x^2 - x + 2] \\ .3 = [q(x) - p(x) = 3x^2 + x - 2] & .4 = [mp(x) - nq(x) = -16x^2 - 5x + 5] \\ .5 = [p(x)\,q(x) = 4x^4 + x^3 + 23x^2 + 5x + 15] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + x^4 - 16x^3 - 18x^2 - 10x - 8]$$

$$Ans4 = [a + b = -3, a\,b = -40], \quad Ans5 = [a = -1, b = 5, a\,b = -5]$$

$$Ans6 = [P(x) = x^4 + 4x^3 - x^2 - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - 2x^3 - 2x^2 + 3 \\ R(x) = -2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x - 2 \\ R(x) = -2x^3 + 3x - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 7x + 18 \\ R(x) = -40 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 13 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644221

$$Ans1 = [a = -4, b = 1, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x - 7] & .2 = [p(x) - q(x) = -x^2 + 3x + 1] \\ .3 = [q(x) - p(x) = x^2 - 3x - 1] & .4 = [mp(x) - nq(x) = -7x^2 + 15x + 11] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 - 10x^2 + 9x + 12] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 - 16x^4 + 12x^3 - 4x^2 + 12x - 8]$$

$$Ans4 = [a + b = -6, a\,b = -16], \quad , \quad Ans5 = [a = -1, b = 5, a\,b = -5]$$

$$Ans6 = [P(x) = x^4 - 4x^3 + 2x^2 - 6x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - x^3 + x^2 + 2x + 3 \\ R(x) = -3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x - 1 \\ R(x) = x^3 + 2x^2 + 3x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 12x + 27 \\ R(x) = 57 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 6x \\ R(x) = 18x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644222

$$Ans1 = [a = 0, b = 2, c = -3]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + x - 4] & .2 = [p(x) - q(x) = -2x^2 - x + 6] \\ .3 = [q(x) - p(x) = 2x^2 + x - 6] & .4 = [mp(x) - nq(x) = -12x^2 - 5x + 28] \\ .5 = [p(x)\,q(x) = 3x^4 + x^3 - 2x^2 + x - 5] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 5x^5 + 8x^4 - 30x^3 + 15x^2 - 15x + 6]$$

$$Ans4 = [a + b = 6, a\,b = -7], \quad , \quad Ans5 = [a = 6, b = 4, a\,b = 24]$$

$$Ans6 = [P(x) = x^4 + 4x^3 - x^2 - 2x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 - x^2 + 2x - 2 \\ R(x) = x + 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 1 \\ R(x) = 2x^3 - 2x^2 + x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 2x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + x \\ R(x) = 2 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 12 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644223

$$Ans1 = [a = 0, b = -1, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x + 3] & .2 = [p(x) - q(x) = -x^2 + 3x + 1] \\ .3 = [q(x) - p(x) = x^2 - 3x - 1] & .4 = [mp(x) - nq(x) = x^2 + 6x + 8] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 + 5x^2 - 6x + 2] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 4x^5 - 2x^4 - 12x^3 - 13x^2 - 8x - 10]$$

$$Ans4 = [a + b = -6, a\,b = -7], \quad , \quad Ans5 = [a = 1, b = 5, a\,b = 5]$$

$$Ans6 = [P(x) = x^4 - 4x^3 - 7x^2 + 31x + 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 + 3x^3 + x^2 + x - 2 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 + 3x + 1 \\ R(x) = x^2 - 2x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x + 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 6x + 15 \\ R(x) = -31 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 6x \\ R(x) = 12x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644224

$$Ans1 = [a = 0, b = 0, c = 1]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 4x + 4] & .2 = [p(x) - q(x) = -x^2 + 4x + 2] \\ .3 = [q(x) - p(x) = x^2 - 4x - 2] & .4 = [mp(x) - nq(x) = x^2 + 8x + 13] \\ .5 = [p(x)\,q(x) = 2x^4 - 4x^3 + 7x^2 - 12x + 3] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 6x^4 + 10x^3 - 2x^2 - 24x - 12]$$

$$Ans4 = [a + b = 1, a\,b = -72], \quad , \quad Ans5 = [a = -4, b = 2, a\,b = -8]$$

$$Ans6 = [P(x) = x^4 - 7x^3 - 4x^2 + 31x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 2x^3 + 3 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 2 \\ R(x) = 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 12x + 24 \\ R(x) = 47 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644225

$$Ans1 = [a = 1, b = 4, c = 4]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x - 1] & .2 = [p(x) - q(x) = -3x^2 + 5x - 3] \\ .3 = [q(x) - p(x) = 3x^2 - 5x + 3] & .4 = [mp(x) - nq(x) = -7x^2 + 15x - 13] \\ .5 = [p(x)\,q(x) = 4x^4 - 5x^3 - 7x^2 + 10x - 2] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 6x^5 - 5x^4 + 5x^3 - 26x^2 - 49x - 20]$$

$$Ans4 = [a + b = 17, a\,b = 72], \quad , \quad Ans5 = [a = -5, b = 4, a\,b = -20]$$

$$Ans6 = [P(x) = x^4 + 7x^3 - 6x^2 - 39x - 4]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - 4x^3 - 2x - 1 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 4x \\ R(x) = -2x^2 - x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x - 6 \\ R(x) = 14 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 6x \\ R(x) = 18x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644226

$$Ans1 = [a = 2, b = 3, c = 2]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 2x + 6] & .2 = [p(x) - q(x) = -2x^2 - 2x] \\ .3 = [q(x) - p(x) = 2x^2 + 2x] & .4 = [mp(x) - nq(x) = -7x^2 - 8x + 3] \\ .5 = [p(x)\,q(x) = 3x^4 + 2x^3 + 12x^2 + 6x + 9] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 - 9x^4 + 18x^3 + 6x^2 - 30x + 36]$$

$$Ans4 = [a + b = -1, a\,b = -2], \quad , \quad Ans5 = [a = -7, b = 4, a\,b = -28]$$

$$Ans6 = [P(x) = x^4 - 2x^3 - 7x^2 + 19x - 4]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 + 4x^3 + 3x^2 - 2x + 1 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x + 4 \\ R(x) = 3x^3 - 2x^2 + x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 7x - 23 \\ R(x) = 66 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 13 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644227

$$Ans1 = [a = -1, b = 0, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + x - 3] & .2 = [p(x) - q(x) = -2x^2 - x + 1] \\ .3 = [q(x) - p(x) = 2x^2 + x - 1] & .4 = [mp(x) - nq(x) = -x^2 - 2x - 1] \\ .5 = [p(x)\,q(x) = 3x^4 + x^3 - 5x^2 - x + 2] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 - 10x^4 + 15x^3 - 4x^2 + 20x - 20]$$

$$Ans4 = [a + b = 12, ab = 35], \quad , \quad Ans5 = [a = 1, b = 6, ab = 6]$$

$$Ans6 = [P(x) = x^4 - 4x^3 + x^2 - 2x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 + 4x^2 - 4x + 1 \\ R(x) = 4x + 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 + 4x - 4 \\ R(x) = x^2 + 4x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 14x + 28 \\ R(x) = 61 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -1 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644228

$$Ans1 = [a = 2, b = -4, c = 0]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x + 3] & .2 = [p(x) - q(x) = -3x^2 + 5x - 5] \\ .3 = [q(x) - p(x) = 3x^2 - 5x + 5] & .4 = [mp(x) - nq(x) = -18x^2 + 25x - 22] \\ .5 = [p(x)\,q(x) = 4x^4 - 5x^3 + 5x - 4] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 6x^5 + 7x^4 - 12x^3 + 6x^2 + 24x - 20]$$

$$Ans4 = [a + b = -16, a\,b = 63], \quad , \quad Ans5 = [a = -5, b = 7, a\,b = -35]$$

$$Ans6 = [P(x) = x^4 + 5x^3 - 2x^2 - 7x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + x \\ R(x) = -3x - 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x \\ R(x) = x^3 - 3x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 14x + 30 \\ R(x) = 56 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 6x \\ R(x) = 12x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644229

$$Ans1 = [a = -3, b = 3, c = -1]$$

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 5x^2 - 4x + 1] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -3x^2 + 4x + 7] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 3x^2 - 4x - 7] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -10x^2 + 12x + 17] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 4x^4 - 4x^3 + 13x^2 - 16x - 12] & .6 = [[\mathrm{p}(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - 5x^5 - 2x^4 - 6x^3 + 32x^2 + 2x - 4]$$

$$Ans4 = [a + b = 2, a\,b = -8], \quad , \quad Ans5 = [a = 1, b = 6, a\,b = 6]$$

$$Ans6 = [\mathrm{P}(x) = x^4 - 5x^3 - 4x^2 + 25x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 2x^4 - 3x^3 + 4x^2 - 2x + 2 \\ \mathrm{R}(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 2x^2 - 3x + 4 \\ \mathrm{R}(x) = -2x^2 + 2x \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -2x - 5 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + x^2 - 2x + 4 \\ \mathrm{R}(x) = -5 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 + 3x \\ \mathrm{R}(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 9 \\ \mathrm{R}(x) = 32 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.644230

$$Ans1 = [a = 3, b = 2, c = -2]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 2x - 9] & .2 = [p(x) - q(x) = -x^2 - 2x + 1] \\ .3 = [q(x) - p(x) = x^2 + 2x - 1] & .4 = [mp(x) - nq(x) = -4x^2 - 6x + 7] \\ .5 = [p(x)\,q(x) = 2x^4 + 2x^3 - 13x^2 - 8x + 20] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 + 3x^4 + 15x^3 - 6x^2 + 12x - 8]$$

$$Ans4 = [a + b = 15, a\,b = 56], \quad , \quad Ans5 = [a = 6, b = 1, a\,b = 6]$$

$$Ans6 = [P(x) = x^4 + 6x^3 - 3x^2 - 16x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 - 2x^3 - 3x^2 + 2 \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x - 2 \\ R(x) = -3x^3 + 2x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 18x + 54 \\ R(x) = 163 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -8 \end{bmatrix} \end{bmatrix}$$

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