Real01 Answers for No.9589

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 2x^5 + 4x^4 + 6x^3 + 7x^2 + 14x - 20]$$

$$Ans4 = [a + b = 1, a\,b = -30], \quad , \quad Ans5 = [a = 5, b = 2, a\,b = 10]$$

$$Ans6 = [P(x) = x^4 + x^3 + 7x^2 + 12x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - 4x^3 - 3x^2 + 3x - 1 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x - 4 \\ R(x) = -3x^3 + 3x^2 - x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 2x - 8 \\ R(x) = 23 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9707

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 - 23x^4 - 30x^3 + 4x^2 - 12x - 20]$$

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

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 - 4x^2 - 1 \\ R(x) = 2x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 - 4x \\ R(x) = -x^2 + 2x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 6x + 11 \\ R(x) = -19 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 2x \\ R(x) = 2x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = -3 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9821

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 3x + 1] & .2 = [p(x) - q(x) = -x^2 - 3x - 7] \\ .3 = [q(x) - p(x) = x^2 + 3x + 7] & .4 = [mp(x) - nq(x) = -x^2 - 6x - 17] \\ .5 = [p(x)\,q(x) = 2x^4 + 3x^3 - 2x^2 - 9x - 12] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 10x^5 + 28x^4 - 24x^3 - 3x^2 + 12x - 12]$$

$$Ans4 = [a + b = 6, a\,b = -27], \quad , \quad Ans5 = [a = -2, b = 5, a\,b = -10]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 - x^2 - 3x - 4 \\ R(x) = -4x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 1 \\ R(x) = -3x^3 - 4x^2 - 4x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 22x + 66 \\ R(x) = 201 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10352

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

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

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - 4x^5 + 6x^4 - 5x^3 + 17x^2 - 18x - 18]$$

$$Ans4 = [a + b = -6, a\,b = 8], \quad , \quad Ans5 = [a = -1, b = 5, a\,b = -5]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 - 4x^2 - 4x - 3 \\ \mathrm{R}(x) = 3x - 2 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4x^2 - 4x - 4 \\ \mathrm{R}(x) = -3x^2 + 3x - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 2x + 1 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 2x^2 - 5x + 8 \\ \mathrm{R}(x) = -15 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 + 9x \\ \mathrm{R}(x) = 27x + 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 4 \\ \mathrm{R}(x) = -7 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10380

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

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

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

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

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 + 3x^3 - 3x^2 - 2x - 1 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 + 3x - 3 \\ R(x) = -2x^2 - x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 12x + 23 \\ R(x) = 49 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 6x \\ R(x) = 18x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10412

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 3x + 5] & .2 = [p(x) - q(x) = -3x^2 + 3x + 1] \\ .3 = [q(x) - p(x) = 3x^2 - 3x - 1] & .4 = [mp(x) - nq(x) = -5x^2 + 6x + 5] \\ .5 = [p(x)\,q(x) = 4x^4 - 3x^3 + 14x^2 - 9x + 6] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 2x^4 - 9x^3 - 16x^2 + 10x + 12]$$

$$Ans4 = [a + b = 6, a\,b = 5], \quad , \quad Ans5 = [a = 7, b = 6, a\,b = 42]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 + 3x^2 - 4x \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x + 3 \\ R(x) = -4x^3 - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 11x + 34 \\ R(x) = 105 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = -6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10487

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 5x - 7] & .2 = [p(x) - q(x) = -2x^2 - 5x + 1] \\ .3 = [q(x) - p(x) = 2x^2 + 5x - 1] & .4 = [mp(x) - nq(x) = -7x^2 - 15x + 6] \\ .5 = [p(x)\,q(x) = 3x^4 + 5x^3 - 13x^2 - 15x + 12] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 12x^4 + 32x^3 + 28x^2 - 24x - 16]$$

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

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 + 4x^2 \\ R(x) = 4x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 + 4x \\ R(x) = 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 28x + 85 \\ R(x) = 254 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10644

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 5x] & .2 = [p(x) - q(x) = -2x^2 - 5x + 10] \\ .3 = [q(x) - p(x) = 2x^2 + 5x - 10] & .4 = [mp(x) - nq(x) = -7x^2 - 20x + 45] \\ .5 = [p(x)\,q(x) = 3x^4 + 5x^3 + 10x^2 + 25x - 25] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 6x^4 + 3x^3 - 17x^2 - 40x - 25]$$

$$Ans4 = [a + b = -4, a\,b = -45], \quad , \quad Ans5 = [a = 6, b = 5, a\,b = 30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 - 4x^2 - 3x \\ R(x) = x + 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 4x - 3 \\ R(x) = x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 9x + 16 \\ R(x) = 30 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 6x \\ R(x) = 18x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11101

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

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

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

$$Ans4 = [a + b = 5, a\,b = -36], \quad , \quad Ans5 = [a = -7, b = 6, a\,b = -42]$$

$$Ans6 = [P(x) = x^4 - 5x^3 - 3x^2 + 20x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 - 2x - 3 \\ R(x) = 4x + 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x \\ R(x) = -2x^3 - 3x^2 + 4x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 24x + 72 \\ R(x) = 211 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 13 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11613

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 3x - 3] & .2 = [p(x) - q(x) = -3x^2 + 3x - 7] \\ .3 = [q(x) - p(x) = 3x^2 - 3x + 7] & .4 = [mp(x) - nq(x) = -7x^2 + 9x - 31] \\ .5 = [p(x)\,q(x) = 4x^4 - 3x^3 - 18x^2 + 15x - 10] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

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

$$Ans4 = [a + b = 1, a\,b = -30], \quad , \quad Ans5 = [a = -5, b = 2, a\,b = -10]$$

$$Ans6 = [P(x) = x^4 + 3x^3 - 6x^2 - 12x + 7]$$

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

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Real01 Answers for No.11720

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 5x + 9] & .2 = [p(x) - q(x) = -3x^2 + 5x - 1] \\ .3 = [q(x) - p(x) = 3x^2 - 5x + 1] & .4 = [mp(x) - nq(x) = -7x^2 + 15x + 5] \\ .5 = [p(x)\, q(x) = 4x^4 - 5x^3 + 21x^2 - 20x + 20] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

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

$$Ans4 = [a + b = 13, a\, b = 42], \quad , \quad Ans5 = [a = -7, b = 2, a\, b = -14]$$

$$Ans6 = [P(x) = x^4 + 5x^3 + 2x^2 + 14x - 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - x^2 - 4x - 4 \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x \\ R(x) = -x^3 - 4x^2 - 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 15x + 30 \\ R(x) = 63 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 - 1 \\ R(x) = 6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12122

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - x - 2] & .2 = [p(x) - q(x) = -2x^2 + x - 4] \\ .3 = [q(x) - p(x) = 2x^2 - x + 4] & .4 = [mp(x) - nq(x) = -3x^2 + 2x - 11] \\ .5 = [p(x)\,q(x) = 3x^4 - x^3 - 8x^2 + 3x - 3] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

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

$$Ans4 = [a + b = 4, a\,b = -21], \quad , \quad Ans5 = [a = 2, b = 1, a\,b = 2]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 - 3x^2 - 3x - 2 \\ R(x) = 4x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 3x - 3 \\ R(x) = -2x^2 + 4x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 - 6x + 10 \\ R(x) = -16 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12133

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 3x + 1] & .2 = [p(x) - q(x) = -3x^2 - 3x + 7] \\ .3 = [q(x) - p(x) = 3x^2 + 3x - 7] & .4 = [mp(x) - nq(x) = -5x^2 - 6x + 18] \\ .5 = [p(x)\,q(x) = 4x^4 + 3x^3 + 13x^2 + 12x - 12] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 3x^5 + 6x^4 + 5x^3 - 11x^2 + 18x + 24]$$

$$Ans4 = [a + b = 5, a\,b = -14], \quad , \quad Ans5 = [a = 7, b = 4, a\,b = 28]$$

$$Ans6 = [P(x) = x^4 + 3x^3 - 5x^2 - 13x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + 3x^2 + 1 \\ R(x) = -3x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 + 3x \\ R(x) = x^2 - 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 + 4 \\ R(x) = -12 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12317

$$Ans1 = [a = 4, b = 3, c = 5]$$

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 2x + 2] & .2 = [p(x) - q(x) = -x^2 + 2x + 8] \\ .3 = [q(x) - p(x) = x^2 - 2x - 8] & .4 = [mp(x) - nq(x) = -x^2 + 4x + 21] \\ .5 = [p(x)\,q(x) = 2x^4 - 2x^3 + 7x^2 - 10x - 15] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

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

$$Ans4 = [a + b = -7, a\,b = 12], \quad , \quad Ans5 = [a = 4, b = 3, a\,b = 12]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - x^3 + 3x^2 - 3x + 3 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x - 1 \\ R(x) = 3x^3 - 3x^2 + 3x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x - 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - x - 1 \\ R(x) = 7 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 15 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12380

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + x - 5] & .2 = [p(x) - q(x) = -3x^2 - x - 1] \\ .3 = [q(x) - p(x) = 3x^2 + x + 1] & .4 = [mp(x) - nq(x) = -7x^2 - 3x - 9] \\ .5 = [p(x)\,q(x) = 4x^4 + x^3 - 14x^2 - 3x + 6] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

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

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

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 + 4x^3 - 3x - 4 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x + 4 \\ R(x) = -3x^2 - 4x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 23x + 71 \\ R(x) = 218 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 3 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12498

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

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

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

$$Ans4 = [a + b = 13, a\,b = 42], \quad , \quad Ans5 = [a = -7, b = 2, a\,b = -14]$$

$$Ans6 = [P(x) = x^4 - 3x^3 + 5x^2 - 10x - 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - 3x^3 - 4x^2 + 4x \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x - 3 \\ R(x) = -4x^3 + 4x^2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 + 2x \\ R(x) = 1 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 6x \\ R(x) = 12x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 8 \\ R(x) = 11 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12554

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 5x - 7] & .2 = [p(x) - q(x) = -2x^2 + 5x - 3] \\ .3 = [q(x) - p(x) = 2x^2 - 5x + 3] & .4 = [mp(x) - nq(x) = -7x^2 + 20x - 17] \\ .5 = [p(x)\,q(x) = 3x^4 - 5x^3 - 17x^2 + 25x + 10] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 9x^5 + 15x^4 + 25x^3 + 5x^2 - 20x - 25]$$

$$Ans4 = [a + b = -5, a\,b = -36], \quad , \quad Ans5 = [a = -5, b = 4, a\,b = -20]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 + 4x^2 + 1 \\ R(x) = -4x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x + 4 \\ R(x) = x^2 - 4x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x - 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 8x + 26 \\ R(x) = -75 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12836

$$Ans1 = [a = -5, b = -3, c = 4]$$

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

$$Ans3 = [p(x)\,q(x) = x^6 + 10x^5 + 18x^4 - 36x^3 + 4x^2 + 16x - 24]$$

$$Ans4 = [a + b = -5, a\,b = -24], \quad , \quad Ans5 = [a = 7, b = 4, a\,b = 28]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + 2 \\ R(x) = x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 \\ R(x) = 2x^2 + x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 13x + 37 \\ R(x) = 113 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12959

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

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

$$Ans3 = [p(x)\,q(x) = x^5 - 9x^4 + 25x^3 - 17x^2 - 15x + 15]$$

$$Ans4 = [a + b = 5, ab = -24], \quad Ans5 = [a = 1, b = 7, ab = 7]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 + 2x^3 - 3x^2 + 2x - 3 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x + 2 \\ R(x) = -3x^3 + 2x^2 - 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - x + 3 \\ R(x) = -10 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -13 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12967

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 5x - 6] & .2 = [p(x) - q(x) = -3x^2 - 5x + 2] \\ .3 = [q(x) - p(x) = 3x^2 + 5x - 2] & .4 = [mp(x) - nq(x) = -7x^2 - 15x + 2] \\ .5 = [p(x)\,q(x) = 4x^4 + 5x^3 - 12x^2 - 10x + 8] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

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

$$Ans4 = [a + b = -7, a\,b = 12], \quad , \quad Ans5 = [a = 3, b = 7, a\,b = 21]$$

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

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

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Real01 Answers for No.12975

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x - 6] & .2 = [p(x) - q(x) = -x^2 + 3x + 4] \\ .3 = [q(x) - p(x) = x^2 - 3x - 4] & .4 = [mp(x) - nq(x) = -8x^2 + 15x + 23] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 - 7x^2 + 3x + 5] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

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

$$Ans4 = [a + b = -2, a\,b = -35], \quad , \quad Ans5 = [a = -3, b = 1, a\,b = -3]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 + x^3 + 3x - 4 \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 1 \\ R(x) = 3x^2 - 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 10x + 29 \\ R(x) = -83 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 4x \\ R(x) = 4x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12979

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + x + 7] & .2 = [p(x) - q(x) = -2x^2 - x + 1] \\ .3 = [q(x) - p(x) = 2x^2 + x - 1] & .4 = [mp(x) - nq(x) = -x^2 - 2x + 14] \\ .5 = [p(x)\,q(x) = 3x^4 + x^3 + 15x^2 + 4x + 12] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 6x^4 + 3x^3 - 26x^2 - 34x - 8]$$

$$Ans4 = [a + b = 4, ab = -5], \quad , \quad Ans5 = [a = -2, b = 7, ab = -14]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + 2 \\ R(x) = 2x + 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 \\ R(x) = 2x^2 + 2x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 18x + 51 \\ R(x) = 150 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13010

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

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 4\,x^2 + x + 4] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -2\,x^2 - x - 6] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 2\,x^2 + x + 6] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -9\,x^2 - 4\,x - 23] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 3\,x^4 + x^3 + 2\,x^2 - x - 5] & .6 = [[\mathrm{p}(x)]^2 = x^4 - 2\,x^2 + 1] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - 6\,x^5 - x^4 - 24\,x^3 - 25\,x^2 + 30\,x + 25]$$

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

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = x^3 - 2\,x^2 - 2\,x + 2 \\ \mathrm{R}(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = x - 2 \\ \mathrm{R}(x) = -2\,x^3 + 2\,x^2 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -7\,x + 6 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 3\,x^2 + 6\,x + 12 \\ \mathrm{R}(x) = 26 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 4\,x^3 - 8\,x \\ \mathrm{R}(x) = 16\,x - 3 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 2 \\ \mathrm{R}(x) = \text{-}9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13020

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 4x + 4] & .2 = [p(x) - q(x) = -2x^2 + 4x - 6] \\ .3 = [q(x) - p(x) = 2x^2 - 4x + 6] & .4 = [mp(x) - nq(x) = -13x^2 + 20x - 27] \\ .5 = [p(x)\,q(x) = 3x^4 - 4x^3 + 2x^2 + 4x - 5] & .6 = [[p(x)]^2 = x^4 - 2x^2 + 1] \end{bmatrix}$$

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

$$Ans4 = [a + b = -1, a\,b = -2], \quad , \quad Ans5 = [a = 5, b = 3, a\,b = 15]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + 3x^2 + x \\ R(x) = -4x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 + 3x + 1 \\ R(x) = -4x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 7x + 17 \\ R(x) = -47 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 6x \\ R(x) = 18x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13028

$$Ans1 = [a = 5, b = 3, c = 4]$$

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

$$Ans3 = [p(x)\,q(x) = x^6 - 3x^5 - 14x^4 + 20x^3 - 6x^2 - 12x + 24]$$

$$Ans4 = [a + b = 6, a\,b = -27], \quad , \quad Ans5 = [a = -1, b = 2, a\,b = -2]$$

$$Ans6 = [P(x) = x^4 - 6x^3 + 4x^2 - 22x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 + x^3 + 4x^2 - 2x \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 1 \\ R(x) = 4x^3 - 2x^2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x^2 + 3x - 10 \\ R(x) = 32 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 2x \\ R(x) = 2x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = -3 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13053

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - x] & .2 = [p(x) - q(x) = -x^2 + x - 8] \\ .3 = [q(x) - p(x) = x^2 - x + 8] & .4 = [mp(x) - nq(x) = -6x^2 + 5x - 36] \\ .5 = [p(x)\,q(x) = 2x^4 - x^3 - 4x^2 + 4x - 16] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 6x^4 - 4x^3 + 42x^2 - 48x + 12]$$

$$Ans4 = [a + b = -5, a\,b = 4], \quad , \quad Ans5 = [a = -7, b = 1, a\,b = -7]$$

$$Ans6 = [P(x) = x^4 + 3x^3 + 6x^2 + 22x - 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - 4x^3 - 3x^2 + 4x + 3 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 4x - 3 \\ R(x) = 4x^2 + 3x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 22x + 65 \\ R(x) = 199 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13068

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 3x - 5] & .2 = [p(x) - q(x) = -3x^2 + 3x - 3] \\ .3 = [q(x) - p(x) = 3x^2 - 3x + 3] & .4 = [mp(x) - nq(x) = -18x^2 + 15x - 3] \\ .5 = [p(x)\,q(x) = 4x^4 - 3x^3 - 17x^2 + 12x + 4] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 2x^4 - 21x^3 + 23x^2 - 20x + 15]$$

$$Ans4 = [a + b = 5, a\,b = -24], \quad , \quad Ans5 = [a = -7, b = 4, a\,b = -28]$$

$$Ans6 = [P(x) = x^4 - 2x^3 - 5x^2 + 13x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + 2x \\ R(x) = -x + 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x \\ R(x) = 2x^3 - x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 3 \\ R(x) = -6 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 15 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13086

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

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

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 + 3x^5 - 4x^4 + 5x^3 + 17x^2 - 14x - 8]$$

$$Ans4 = [a + b = 3, a\,b = -54], \quad , \quad Ans5 = [a = 6, b = 5, a\,b = 30]$$

$$Ans6 = [\mathrm{P}(x) = x^4 - 3x^3 + 7x^2 - 15x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 - 3x^2 + 2x - 1 \\ \mathrm{R}(x) = 2x + 1 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4x^2 - 3x + 2 \\ \mathrm{R}(x) = -x^2 + 2x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -5x + 6 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 - 4x + 14 \\ \mathrm{R}(x) = -45 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 + 12x \\ \mathrm{R}(x) = 36x + 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 7 \\ \mathrm{R}(x) = 12 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13111

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 + 5x^4 - 6x^3 - 15x^2 - 21x + 15]$$

$$Ans4 = [a + b = 1, a\,b = -42], \quad , \quad Ans5 = [a = -5, b = 7, a\,b = -35]$$

$$Ans6 = [P(x) = x^4 - 2x^3 - 5x^2 + 12x - 1]$$

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

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Real01 Answers for No.13116

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

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

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 + 3x^5 - 2x^4 - 4x^3 - 7x^2 + 23x - 10]$$

$$Ans4 = [a + b = -10, a\,b = 9], \quad , \quad Ans5 = [a = 1, b = 6, a\,b = 6]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 - 3x^2 - 3x + 3 \\ \mathrm{R}(x) = -x + 1 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4x - 3 \\ \mathrm{R}(x) = -3x^3 + 3x^2 - x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -2x - 7 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 - x^2 - x + 5 \\ \mathrm{R}(x) = -17 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 - 9x \\ \mathrm{R}(x) = 27x - 2 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 8 \\ \mathrm{R}(x) = 27 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13122

$$Ans1 = [a = 5, b = 3, c = -2]$$

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

$$Ans3 = [p(x)\,q(x) = x^6 - 13x^4 - 12x^3 - 4x^2 + 12x + 16]$$

$$Ans4 = [a + b = 10, a\,b = 24], \quad , \quad Ans5 = [a = 3, b = 1, a\,b = 3]$$

$$Ans6 = [P(x) = x^4 - 3x^3 + 7x^2 - 16x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + 4x^2 + 2x - 2 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x + 4 \\ R(x) = 2x^3 - 2x^2 - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 4x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 9x + 25 \\ R(x) = 78 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13123

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 4x - 6] & .2 = [p(x) - q(x) = -3x^2 - 4x - 4] \\ .3 = [q(x) - p(x) = 3x^2 + 4x + 4] & .4 = [mp(x) - nq(x) = -5x^2 - 8x - 13] \\ .5 = [p(x)\,q(x) = 4x^4 + 4x^3 - 21x^2 - 20x + 5] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 - 5x^4 - 5x^3 + 13x^2 + 19x - 15]$$

$$Ans4 = [a + b = -15, a\,b = 56], \quad , \quad Ans5 = [a = 2, b = 3, a\,b = 6]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 + 4x^3 - 3x^2 - x + 4 \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 + 4x - 3 \\ R(x) = -x^2 + 4x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 6x + 15 \\ R(x) = -41 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 3 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13126

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 4x - 1] & .2 = [p(x) - q(x) = -2x^2 + 4x - 9] \\ .3 = [q(x) - p(x) = 2x^2 - 4x + 9] & .4 = [mp(x) - nq(x) = -4x^2 + 12x - 37] \\ .5 = [p(x)\,q(x) = 3x^4 - 4x^3 - 11x^2 + 20x - 20] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 6x^4 + 8x^3 - 33x^2 - 6x + 6]$$

$$Ans4 = [a + b = 9, a\,b = 20], \quad , \quad Ans5 = [a = -6, b = 5, a\,b = -30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 + x^2 + 3x + 2 \\ R(x) = x + 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 + x + 3 \\ R(x) = 2x^2 + x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x - 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 19x + 55 \\ R(x) = 167 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 4x \\ R(x) = 4x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 18 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13325

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 5x - 1] & .2 = [p(x) - q(x) = -3x^2 - 5x - 9] \\ .3 = [q(x) - p(x) = 3x^2 + 5x + 9] & .4 = [mp(x) - nq(x) = -13x^2 - 20x - 31] \\ .5 = [p(x)\,q(x) = 4x^4 + 5x^3 - 16x^2 - 25x - 20] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

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

$$Ans4 = [a + b = 15, a\,b = 54], \quad , \quad Ans5 = [a = -1, b = 6, a\,b = -6]$$

$$Ans6 = [P(x) = x^4 - 6x^3 + 4x^2 - 22x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - 2x^3 + 2x^2 + 3x + 4 \\ R(x) = 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 2x + 2 \\ R(x) = 3x^2 + 4x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x + 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 11x + 19 \\ R(x) = 40 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -8 \end{bmatrix} \end{bmatrix}$$

Real01 Answers for No.13421

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 3x - 4] & .2 = [p(x) - q(x) = -2x^2 + 3x - 6] \\ .3 = [q(x) - p(x) = 2x^2 - 3x + 6] & .4 = [mp(x) - nq(x) = -x^2 + 6x - 27] \\ .5 = [p(x)\,q(x) = 3x^4 - 3x^3 - 14x^2 + 15x - 5] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 - 10x^3 + 17x^2 + 14x - 20]$$

$$Ans4 = [a + b = -10, a\,b = 9], \quad , \quad Ans5 = [a = -5, b = 1, a\,b = -5]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + 3x^2 - 2x + 3 \\ R(x) = -3x - 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 3 \\ R(x) = -2x^3 + 3x^2 - 3x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 + 3 \\ R(x) = -7 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13646

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 2x] & .2 = [p(x) - q(x) = -x^2 - 2x + 6] \\ .3 = [q(x) - p(x) = x^2 + 2x - 6] & .4 = [mp(x) - nq(x) = -7x^2 - 10x + 24] \\ .5 = [p(x)\,q(x) = 2x^4 + 2x^3 + 3x^2 + 6x - 9] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 3x^5 - x^4 + 15x^3 - 23x^2 + 9x - 12]$$

$$Ans4 = [a + b = 13, a\,b = 42], \quad , \quad Ans5 = [a = -5, b = 2, a\,b = -10]$$

$$Ans6 = [P(x) = x^4 + 7x^3 - 6x^2 - 37x + 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - 4x^3 + 3 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 - 4x \\ R(x) = 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 17x + 52 \\ R(x) = 157 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 13 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13862

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

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

$$Ans3 = [p(x)\,q(x) = x^5 - 2x^4 + 6x^3 - 12x^2 + 21x - 18]$$

$$Ans4 = [a + b = 7, a\,b = 10], \quad , \quad Ans5 = [a = -6, b = 4, a\,b = -24]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^3 - 2x^2 - 4x + 4 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 2x - 4 \\ R(x) = 4x^2 + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x^2 + 6x - 18 \\ R(x) = 53 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 8 \\ R(x) = 26 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13943

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

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

$$Ans3 = [p(x)\,q(x) = x^6 - 8x^5 + 18x^4 - 36x^3 + 2x^2 - 4x + 12]$$

$$Ans4 = [a + b = -2, a\,b = -15], \quad , \quad Ans5 = [a = 6, b = 5, a\,b = 30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - 2x^2 - x + 2 \\ R(x) = 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - 2 \\ R(x) = -x^2 + 2x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 15x + 49 \\ R(x) = 144 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13968

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

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

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^6 - 2x^5 - 12x^4 + 12x^3 + 42x^2 - 12x - 36]$$

$$Ans4 = [a + b = -2, a\,b = -3], \quad , \quad Ans5 = [a = 6, b = 5, a\,b = 30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = x^4 + 4x^2 + x + 4 \\ \mathrm{R}(x) = -3 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 4x^3 + x^2 + 4x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -4x - 4 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 7x^2 + 12x + 21 \\ \mathrm{R}(x) = 43 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 + 9x \\ \mathrm{R}(x) = 27x + 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 2 \\ \mathrm{R}(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13981

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 2x - 6] & .2 = [p(x) - q(x) = -2x^2 - 2x + 2] \\ .3 = [q(x) - p(x) = 2x^2 + 2x - 2] & .4 = [mp(x) - nq(x) = -12x^2 - 10x + 14] \\ .5 = [p(x)\,q(x) = 3x^4 + 2x^3 - 10x^2 - 4x + 8] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + x^4 - 6x^3 - 22x^2 - 16x - 24]$$

$$Ans4 = [a + b = 10, a\,b = 9], \quad , \quad Ans5 = [a = 7, b = 4, a\,b = 28]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 + 3x^3 + 4x^2 - 4x + 3 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 + 3x + 4 \\ R(x) = -4x^2 + 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 5x + 17 \\ R(x) = -47 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.14006

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

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

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

$$Ans4 = [a + b = 1, a\, b = -20], \quad , \quad Ans5 = [a = -3, b = 4, a\, b = -12]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 + 4x^3 - 2x^2 + 2x - 4 \\ R(x) = 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x + 4 \\ R(x) = -2x^3 + 2x^2 - 4x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 4x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 10x + 32 \\ R(x) = -95 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x - 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.14020

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + x - 2] & .2 = [p(x) - q(x) = -3x^2 - x + 8] \\ .3 = [q(x) - p(x) = 3x^2 + x - 8] & .4 = [mp(x) - nq(x) = -16x^2 - 5x + 37] \\ .5 = [p(x)\,q(x) = 4x^4 + x^3 + 7x^2 + 3x - 15] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 - 6x^4 + 4x^3 + 8x^2 - 36x + 24]$$

$$Ans4 = [a + b = -2, a\,b = -35], \quad , \quad Ans5 = [a = 7, b = 4, a\,b = 28]$$

$$Ans6 = [P(x) = x^4 + 2x^3 - 7x^2 - 11x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 + 2x^3 - 2x^2 + 3 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x + 2 \\ R(x) = -2x^3 + 3x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 5x + 17 \\ R(x) = -47 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 16 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.14022

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 6x^5 - 4x^4 + 3x^3 + 13x^2 - 42x + 20]$$

$$Ans4 = [a + b = -10, a\,b = 16], \quad , \quad Ans5 = [a = -7, b = 6, a\,b = -42]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 - 2x^2 - 2x \\ R(x) = -2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x^2 - 2 \\ R(x) = -2x^2 - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x + 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 5x - 8 \\ R(x) = 15 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 6x \\ R(x) = 18x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -3 \end{bmatrix} \end{bmatrix}$$

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