Real01 Answers for No.9594

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

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

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

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

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 + x^2 - 3 \\ R(x) = -4x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x + 1 \\ R(x) = -3x^2 - 4x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -3x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 24x + 69 \\ R(x) = 211 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 6x \\ R(x) = 12x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

Real01 Answers for No.9608

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - x + 6] & .2 = [p(x) - q(x) = -3x^2 + x + 4] \\ .3 = [q(x) - p(x) = 3x^2 - x - 4] & .4 = [mp(x) - nq(x) = -11x^2 + 4x + 21] \\ .5 = [p(x)\,q(x) = 4x^4 - x^3 + 21x^2 - 5x + 5] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 4x^4 - 6x^3 - 33x^2 + 6x + 18]$$

$$Ans4 = [a + b = -8, a\,b = -9], \quad , \quad Ans5 = [a = 5, b = 6, a\,b = 30]$$

$$Ans6 = [P(x) = x^4 - 7x^3 - 6x^2 + 44x - 7]$$

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

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Real01 Answers for No.9646

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 2x - 7] & .2 = [p(x) - q(x) = -x^2 - 2x + 3] \\ .3 = [q(x) - p(x) = x^2 + 2x - 3] & .4 = [mp(x) - nq(x) = -6x^2 - 10x + 17] \\ .5 = [p(x)\,q(x) = 2x^4 + 2x^3 - 9x^2 - 4x + 10] & .6 = [[p(x)]^2 = x^4 - 4x^2 + 4] \end{bmatrix}$$

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

$$Ans4 = [a + b = 13, a\,b = 36], \quad , \quad Ans5 = [a = 5, b = 3, a\,b = 15]$$

$$Ans6 = [P(x) = x^4 + 4x^3 - 5x^2 - 15x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 - 4x^3 + 2x^2 - 3x - 3 \\ R(x) = 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 - 4x + 2 \\ R(x) = -3x^2 - 3x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 23x + 66 \\ R(x) = 201 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 9x \\ R(x) = 27x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 8 \\ R(x) = 28 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9649

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 4x - 1] & .2 = [p(x) - q(x) = -3x^2 - 4x - 7] \\ .3 = [q(x) - p(x) = 3x^2 + 4x + 7] & .4 = [mp(x) - nq(x) = -7x^2 - 12x - 29] \\ .5 = [p(x)\,q(x) = 4x^4 + 4x^3 - 13x^2 - 16x - 12] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 + 2x^5 + 6x^4 - 6x^3 - 14x^2 - 40x - 12]$$

$$Ans4 = [a + b = 4, a\,b = -32], \quad , \quad Ans5 = [a = -6, b = 4, a\,b = -24]$$

$$Ans6 = [P(x) = x^4 - 3x^3 + 6x^2 - 15x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^3 + x^2 - 4 \\ R(x) = -2x - 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 + x \\ R(x) = -4x^2 - 2x - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 14x + 25 \\ R(x) = 46 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 2x \\ R(x) = 2x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9669

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 5x + 5] & .2 = [p(x) - q(x) = -x^2 - 5x + 1] \\ .3 = [q(x) - p(x) = x^2 + 5x - 1] & .4 = [mp(x) - nq(x) = x^2 - 10x + 11] \\ .5 = [p(x)\, q(x) = 2x^4 + 5x^3 + 8x^2 + 15x + 6] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\, q(x) = x^5 - 4x^4 + 11x^3 - 17x^2 + 18x + 18]$$

$$Ans4 = [a + b = -17, ab = 72], \quad , \quad Ans5 = [a = 4, b = 3, ab = 12]$$

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

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

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Real01 Answers for No.9717

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x + 5] & .2 = [p(x) - q(x) = -x^2 + 3x + 3] \\ .3 = [q(x) - p(x) = x^2 - 3x - 3] & .4 = [mp(x) - nq(x) = -6x^2 + 15x + 11] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 + 9x^2 - 12x + 4] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

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

$$Ans4 = [a + b = 6, a\,b = \text{-}27], \quad , \quad Ans5 = [a = \text{-}1, b = 5, a\,b = \text{-}5]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 + 3x^3 - 4x^2 + 1 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 + 3x - 4 \\ R(x) = x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 7x + 14 \\ R(x) = 26 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = \text{-}10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9763

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

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

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

$$Ans4 = [a + b = -4, a\,b = -45], \quad , \quad Ans5 = [a = 2, b = 5, a\,b = 10]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 - 2x^2 + 3x + 1 \\ \mathrm{R}(x) = -2x + 3 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4x^2 - 2x + 3 \\ \mathrm{R}(x) = x^2 - 2x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 7x - 5 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + x^2 - 6x + 15 \\ \mathrm{R}(x) = -28 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 - 8x \\ \mathrm{R}(x) = 16x - 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 5 \\ \mathrm{R}(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9877

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 6x^5 + 4x^4 - 6x^3 - 40x^2 - 48x - 16]$$

$$Ans4 = [a + b = 2, a\,b = -8], \quad , \quad Ans5 = [a = 3, b = 5, a\,b = 15]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 + 4x^2 + 3x + 2 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x \\ R(x) = 4x^3 + 3x^2 + 2x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 3x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 14x + 38 \\ R(x) = 116 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = -8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.9911

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

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

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^5 - x^4 - 26\,x^3 + 35\,x^2 + 20\,x - 30]$$

$$Ans4 = [a + b = 6, a\,b = -16], \quad , \quad Ans5 = [a = -4, b = 5, a\,b = -20]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4\,x^4 - x^3 - 3\,x^2 - 3\,x \\ \mathrm{R}(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4\,x - 1 \\ \mathrm{R}(x) = -3\,x^3 - 3\,x^2 - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -3\,x - 5 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 3\,x^2 + 8\,x + 20 \\ \mathrm{R}(x) = 38 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 2\,x^3 + 2\,x \\ \mathrm{R}(x) = 2\,x - 3 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 2 \\ \mathrm{R}(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10027

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 4x - 9] & .2 = [p(x) - q(x) = -3x^2 + 4x + 1] \\ .3 = [q(x) - p(x) = 3x^2 - 4x - 1] & .4 = [mp(x) - nq(x) = -17x^2 + 20x + 13] \\ .5 = [p(x)\,q(x) = 4x^4 - 4x^3 - 21x^2 + 16x + 20] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + x^4 - 11x^3 + 14x^2 + 12x - 20]$$

$$Ans4 = [a + b = 13, a\,b = 36], \quad , \quad Ans5 = [a = -7, b = 1, a\,b = -7]$$

$$Ans6 = [P(x) = x^4 + 4x^3 + 5x^2 + 26x - 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 + 3x^3 + 4x^2 + 4x - 1 \\ R(x) = -2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x + 3 \\ R(x) = 4x^3 + 4x^2 - x - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x + 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 12x + 27 \\ R(x) = 52 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10063

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 2x - 4] & .2 = [p(x) - q(x) = -3x^2 - 2x + 6] \\ .3 = [q(x) - p(x) = 3x^2 + 2x - 6] & .4 = [mp(x) - nq(x) = -13x^2 - 8x + 23] \\ .5 = [p(x)\,q(x) = 4x^4 + 2x^3 - x^2 + 2x - 5] & .6 = [[p(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 5x^4 - x^3 + 18x^2 - 30x + 10]$$

$$Ans4 = [a + b = -9, a\,b = 20], \quad , \quad Ans5 = [a = 4, b = 2, a\,b = 8]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 + 2x^2 - 2x + 2 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x \\ R(x) = 2x^3 - 2x^2 + 2x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x + 6 \\ R(x) = -14 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10367

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 - 2x + 2] & .2 = [p(x) - q(x) = -3x^2 + 2x - 8] \\ .3 = [q(x) - p(x) = 3x^2 - 2x + 8] & .4 = [mp(x) - nq(x) = -8x^2 + 6x - 27] \\ .5 = [p(x)\,q(x) = 4x^4 - 2x^3 - 7x^2 + 6x - 15] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 6x^4 + 14x^3 - 19x^2 + 12x - 20]$$

$$Ans4 = [a + b = 7, a\,b = 6], \quad , \quad Ans5 = [a = -1, b = 3, a\,b = -3]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - x^3 + 2x^2 - 4x - 4 \\ R(x) = 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 1 \\ R(x) = 2x^3 - 4x^2 - 4x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 21x + 64 \\ R(x) = 189 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 10 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10372

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 + 5x + 4] & .2 = [p(x) - q(x) = -x^2 - 5x + 2] \\ .3 = [q(x) - p(x) = x^2 + 5x - 2] & .4 = [mp(x) - nq(x) = x^2 - 10x + 13] \\ .5 = [p(x)\,q(x) = 2x^4 + 5x^3 + 7x^2 + 15x + 3] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

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

$$Ans4 = [a + b = 5, ab = -6], \quad , \quad Ans5 = [a = -2, b = 6, ab = -12]$$

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

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

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Real01 Answers for No.10375

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 5x + 2] & .2 = [p(x) - q(x) = -2x^2 + 5x + 4] \\ .3 = [q(x) - p(x) = 2x^2 - 5x - 4] & .4 = [mp(x) - nq(x) = -13x^2 + 25x + 11] \\ .5 = [p(x)\,q(x) = 3x^4 - 5x^3 + 8x^2 - 15x - 3] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

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

$$Ans4 = [a + b = -15, a\,b = 56], \quad , \quad Ans5 = [a = -7, b = 2, a\,b = -14]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 - x^2 - 4x + 3 \\ R(x) = x + 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 - x - 4 \\ R(x) = 3x^2 + x + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 14x + 39 \\ R(x) = 116 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10426

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

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

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

$$Ans4 = [a + b = -6, a\,b = -16], \quad , \quad Ans5 = [a = -6, b = 5, a\,b = -30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 + 4x^2 - 4 \\ R(x) = 4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 + 4x \\ R(x) = -4x^2 + 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - x^2 + 6x - 12 \\ R(x) = 25 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -6 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.10628

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

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 4x^2 - 3x - 2] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -2x^2 + 3x - 6] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 2x^2 - 3x + 6] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -12x^2 + 15x - 22] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 3x^4 - 3x^3 - 10x^2 + 12x - 8] & .6 = [[\mathrm{p}(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^5 + 11x^4 + 25x^3 - 36x^2 - 30x + 30]$$

$$Ans4 = [a + b = 2, a\,b = -15], \quad , \quad Ans5 = [a = -3, b = 6, a\,b = -18]$$

$$Ans6 = [\mathrm{P}(x) = x^4 - 2x^3 + 6x^2 - 9x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4x^4 - 2x^3 - x - 4 \\ \mathrm{R}(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4x^2 - 2x \\ \mathrm{R}(x) = -x^2 - 4x \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = -6x + 2 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 7x^2 + 12x + 22 \\ \mathrm{R}(x) = 48 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 + 8x \\ \mathrm{R}(x) = 16x - 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 \\ \mathrm{R}(x) = -5 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11408

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 3x + 5] & .2 = [p(x) - q(x) = -3x^2 - 3x + 3] \\ .3 = [q(x) - p(x) = 3x^2 + 3x - 3] & .4 = [mp(x) - nq(x) = -8x^2 - 9x + 13] \\ .5 = [p(x)\,q(x) = 4x^4 + 3x^3 + 17x^2 + 12x + 4] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 3x^5 + 12x^3 - 11x^2 - 15x + 20]$$

$$Ans4 = [a + b = 8, a\,b = 12], \quad , \quad Ans5 = [a = 5, b = 6, a\,b = 30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - x^3 + x^2 + 3x \\ R(x) = -1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 - x + 1 \\ R(x) = 3x^2 - 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 2x + 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 + 10x + 20 \\ R(x) = 39 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11560

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

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

$$Ans3 = [p(x)\,q(x) = x^6 - 6x^5 + 5x^4 - 2x^3 + 7x^2 + 20x - 25]$$

$$Ans4 = [a + b = 4, a\,b = \text{-}32], \quad , \quad Ans5 = [a = \text{-}5, b = 6, a\,b = \text{-}30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^3 + x^2 + 4x \\ R(x) = 4x - 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 + x + 4 \\ R(x) = 4x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 7x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 8x^2 + 20x + 64 \\ R(x) = 191 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 2x \\ R(x) = 2x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = \text{-}9 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.11806

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 + 4x^4 - 2x^3 - 10x^2 - 20x - 16]$$

$$Ans4 = [a + b = -10, a\,b = 21], \quad , \quad Ans5 = [a = -3, b = 4, a\,b = -12]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 + x^3 + 4x^2 - x \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x + 1 \\ R(x) = 4x^3 - x^2 - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x + 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 3x^2 + 6x + 16 \\ R(x) = 34 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 6x \\ R(x) = 18x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 26 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12219

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 5x - 1] & .2 = [p(x) - q(x) = -2x^2 + 5x + 7] \\ .3 = [q(x) - p(x) = 2x^2 - 5x - 7] & .4 = [mp(x) - nq(x) = -5x^2 + 15x + 24] \\ .5 = [p(x)\,q(x) = 3x^4 - 5x^3 + 5x^2 - 15x - 12] & .6 = [[p(x)]^2 = x^4 + 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 27x^3 - 8x^2 - 10x - 4]$$

$$Ans4 = [a + b = -2, a\,b = -24], \quad , \quad Ans5 = [a = 6, b = 5, a\,b = 30]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 + 3x^3 + 4x^2 - 2x \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 + 3x + 4 \\ R(x) = -2x^2 - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x + 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x^2 + 2x - 10 \\ R(x) = 29 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12809

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x - 3] & .2 = [p(x) - q(x) = -x^2 + 3x - 7] \\ .3 = [q(x) - p(x) = x^2 - 3x + 7] & .4 = [mp(x) - nq(x) = -x^2 + 6x - 19] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 - 8x^2 + 15x - 10] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 + 3x^4 + x^3 - 19x^2 - 42x - 24]$$

$$Ans4 = [a + b = -10, a\,b = 24], \quad , \quad Ans5 = [a = -5, b = 4, a\,b = -20]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 + 2x - 3 \\ R(x) = -4 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 \\ R(x) = 2x^2 - 3x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -7x + 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 7x^2 + 20x + 63 \\ R(x) = 185 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 4 \\ R(x) = -8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12954

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - x - 9] & .2 = [p(x) - q(x) = -2x^2 + x + 1] \\ .3 = [q(x) - p(x) = 2x^2 - x - 1] & .4 = [mp(x) - nq(x) = -7x^2 + 3x + 7] \\ .5 = [p(x)\,q(x) = 3x^4 - x^3 - 17x^2 + 4x + 20] & .6 = [[p(x)]^2 = x^4 - 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - x^5 - 17x^4 + 12x^3 + 3x^2 - 15x + 9]$$

$$Ans4 = [a + b = 4, a\,b = 3], \quad , \quad Ans5 = [a = -1, b = 7, a\,b = -7]$$

$$Ans6 = [P(x) = x^4 - 7x^3 - 5x^2 + 41x + 1]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^4 - 2x^3 + 3x^2 + x + 2 \\ R(x) = 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 2x + 3 \\ R(x) = x^2 + 2x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 9x + 18 \\ R(x) = 35 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 - 1 \\ R(x) = 8 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.12964

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 3x^5 + 18x^3 - 40x^2 - 12x + 24]$$

$$Ans4 = [a + b = -6, ab = 8], \quad , \quad Ans5 = [a = 3, b = 1, ab = 3]$$

$$Ans6 = [P(x) = x^4 + 3x^3 - 6x^2 - 12x - 1]$$

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

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Real01 Answers for No.12971

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 - 3x + 6] & .2 = [p(x) - q(x) = -2x^2 + 3x + 2] \\ .3 = [q(x) - p(x) = 2x^2 - 3x - 2] & .4 = [mp(x) - nq(x) = -9x^2 + 12x + 4] \\ .5 = [p(x)\,q(x) = 3x^4 - 3x^3 + 14x^2 - 12x + 8] & .6 = [[p(x)]^2 = x^4 + 8x^2 + 16] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 - 11x^4 + 12x^3 + 4x^2 + 8x - 12]$$

$$Ans4 = [a + b = 2, a\,b = -48], \quad , \quad Ans5 = [a = -6, b = 1, a\,b = -6]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^4 + 2x^3 + 4x^2 + 2x + 3 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 + 2x + 4 \\ R(x) = 2x^2 + 3x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 6x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + x^2 - 4x + 8 \\ R(x) = -20 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 + 3x \\ R(x) = 3x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13023

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

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

$$Ans3 = [p(x)\,q(x) = x^6 - 4x^5 - 10x^4 + 16x^3 + 28x^2 - 16x - 24]$$

$$Ans4 = [a + b = -11, a\,b = 24], \quad , \quad Ans5 = [a = -3, b = 2, a\,b = -6]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 - 3x^2 - 2 \\ R(x) = -2x \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 - 3x \\ R(x) = -2x^2 - 2x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 2x - 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 16x + 52 \\ R(x) = 155 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 24 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13033

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

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

$$Ans3 = [p(x)\,q(x) = x^6 + 2x^5 - 2x^4 + 3x^3 + 11x^2 + 4x - 10]$$

$$Ans4 = [a + b = 8, a\,b = 12], \quad , \quad Ans5 = [a = -4, b = 7, a\,b = -28]$$

$$Ans6 = [P(x) = x^4 - x^3 - 6x^2 + 10x + 3]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 5x^4 + 4x^3 + 2x \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 5x + 4 \\ R(x) = 2x^2 + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -6x - 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 12x + 38 \\ R(x) = 112 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x + 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 5 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13061

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

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

$$Ans3 = [p(x)\,q(x) = x^5 - 6x^4 + 4x^3 + 22x^2 - 12x - 24]$$

$$Ans4 = [a + b = 13, a\,b = 42], \quad , \quad Ans5 = [a = 5, b = 6, a\,b = 30]$$

$$Ans6 = [P(x) = x^4 - 7x^3 - 3x^2 + 26x - 7]$$

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

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Real01 Answers for No.13063

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 5x^2 + 2x - 2] & .2 = [p(x) - q(x) = -3x^2 - 2x - 4] \\ .3 = [q(x) - p(x) = 3x^2 + 2x + 4] & .4 = [mp(x) - nq(x) = -7x^2 - 6x - 18] \\ .5 = [p(x)\,q(x) = 4x^4 + 2x^3 - 11x^2 - 6x - 3] & .6 = [[p(x)]^2 = x^4 - 6x^2 + 9] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 4x^4 - 7x^3 + 16x^2 - 36x + 30]$$

$$Ans4 = [a + b = -4, a\,b = -12], \quad , \quad Ans5 = [a = 4, b = 7, a\,b = 28]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - 3x^3 + x + 2 \\ R(x) = 0 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x - 3 \\ R(x) = x^2 + 2x \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -x - 2 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 11x + 19 \\ R(x) = 41 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x + 2 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 1 \\ R(x) = 4 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13064

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

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

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^5 - 6x^4 + 4x^3 - 9x^2 - 14x + 6]$$

$$Ans4 = [a + b = -9, a\,b = 8], \quad , \quad Ans5 = [a = 5, b = 7, a\,b = 35]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 - 2x^2 + 2x - 1 \\ \mathrm{R}(x) = 4x \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 3x^2 - 2x + 2 \\ \mathrm{R}(x) = -x^2 + 4x \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = 5x - 5 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 2x^2 - 3x + 13 \\ \mathrm{R}(x) = -42 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 2x^3 - 6x \\ \mathrm{R}(x) = 18x + 5 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 4 \\ \mathrm{R}(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13065

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

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

$$Ans3 = [p(x)\,q(x) = x^5 + 3x^4 - 21x^2 - 45x - 18]$$

$$Ans4 = [a + b = 7, a\,b = 10], \quad , \quad Ans5 = [a = 6, b = 3, a\,b = 18]$$

$$Ans6 = [P(x) = x^4 + 5x^3 - 4x^2 - 17x - 2]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 4x^4 - 2x^3 + 2x^2 + 3x - 2 \\ R(x) = 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 4x^2 - 2x + 2 \\ R(x) = 3x^2 - 2x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -4x - 4 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 2x + 4 \\ R(x) = -15 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 9 \\ R(x) = 22 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13197

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 3x^2 - 3x - 3] & .2 = [p(x) - q(x) = -x^2 + 3x + 7] \\ .3 = [q(x) - p(x) = x^2 - 3x - 7] & .4 = [mp(x) - nq(x) = -2x^2 + 9x + 23] \\ .5 = [p(x)\,q(x) = 2x^4 - 3x^3 - x^2 - 6x - 10] & .6 = [[p(x)]^2 = x^4 + 4x^2 + 4] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^6 - 42x^4 + 36x^3 - 4x^2 - 24x + 24]$$

$$Ans4 = [a + b = 3, ab = 2], \quad , \quad Ans5 = [a = 7, b = 3, ab = 21]$$

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

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

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Real01 Answers for No.13907

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

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

$$Ans3 = [p(x)\,q(x) = x^6 - 2x^5 + 4x^4 + 4x^3 - 11x^2 + 22x - 12]$$

$$Ans4 = [a + b = 2, a\,b = -15], \quad , \quad Ans5 = [a = -7, b = 2, a\,b = -14]$$

$$Ans6 = [P(x) = x^4 - 4x^3 - 3x^2 + 15x + 7]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = x^3 - 4x^2 + 4x - 1 \\ R(x) = -2x + 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 - 4x + 4 \\ R(x) = -x^2 - 2x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x - 5 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 8x + 13 \\ R(x) = 22 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 2x^3 - 4x \\ R(x) = 8x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 \\ R(x) = -5 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13975

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

$$Ans2 = \begin{bmatrix} .1 = [\mathrm{p}(x) + \mathrm{q}(x) = 5x^2 + x - 1] & .2 = [\mathrm{p}(x) - \mathrm{q}(x) = -3x^2 - x + 3] \\ .3 = [\mathrm{q}(x) - \mathrm{p}(x) = 3x^2 + x - 3] & .4 = [\mathrm{mp}(x) - \mathrm{nq}(x) = -13x^2 - 4x + 11] \\ .5 = [\mathrm{p}(x)\,\mathrm{q}(x) = 4x^4 + x^3 + 2x^2 + x - 2] & .6 = [[\mathrm{p}(x)]^2 = x^4 + 2x^2 + 1] \end{bmatrix}$$

$$Ans3 = [\mathrm{p}(x)\,\mathrm{q}(x) = x^5 - x^4 - 8x^3 + 11x^2 + 10x - 10]$$

$$Ans4 = [a + b = 3, a\,b = 2], \quad , \quad Ans5 = [a = \text{-}1, b = 4, a\,b = \text{-}4]$$

$$Ans6 = [\mathrm{P}(x) = x^4 + 5x^3 + 2x^2 + 16x - 5]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} \mathrm{Q}(x) = 4x^3 - x^2 + 3x + 2 \\ \mathrm{R}(x) = 4x - 4 \end{bmatrix} & .2 = \begin{bmatrix} \mathrm{Q}(x) = 4x - 1 \\ \mathrm{R}(x) = 3x^3 + 2x^2 + 4x - 4 \end{bmatrix} \\ .3 = \begin{bmatrix} \mathrm{Q}(x) = x \\ \mathrm{R}(x) = x - 1 \end{bmatrix} & .4 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 7x^2 + 14x + 27 \\ \mathrm{R}(x) = 50 \end{bmatrix} \\ .5 = \begin{bmatrix} \mathrm{Q}(x) = 3x^3 - 9x \\ \mathrm{R}(x) = 27x - 2 \end{bmatrix} & .6 = \begin{bmatrix} \mathrm{Q}(x) = x^3 + 1 \\ \mathrm{R}(x) = 2 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13984

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

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

$$Ans3 = [p(x)\,q(x) = x^5 + 6x^4 + 9x^3 + 28x^2 + 8x - 8]$$

$$Ans4 = [a + b = 8, a\,b = 15], \quad , \quad Ans5 = [a = 5, b = 3, a\,b = 15]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 + 4x^2 \\ R(x) = -2x - 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x + 4 \\ R(x) = -2x - 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = 5x + 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 - 4 \\ R(x) = 10 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 7 \\ R(x) = 16 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.13991

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

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

$$Ans3 = [p(x)\,q(x) = x^5 + x^4 - 18x^3 - 11x^2 - 15x - 6]$$

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

$$Ans6 = [P(x) = x^4 - 5x^3 + 7x^2 - 32x - 4]$$

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 2x^3 - 2x^2 + 4 \\ R(x) = 2x + 2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 2x^2 - 2x \\ R(x) = 4x^2 + 2x + 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x + 7 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 5x^2 + 14x + 31 \\ R(x) = 63 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 6x \\ R(x) = 12x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 17 \end{bmatrix} \end{bmatrix}$$

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Real01 Answers for No.14005

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

$$Ans2 = \begin{bmatrix} .1 = [p(x) + q(x) = 4x^2 + 2x - 7] & .2 = [p(x) - q(x) = -2x^2 - 2x - 3] \\ .3 = [q(x) - p(x) = 2x^2 + 2x + 3] & .4 = [mp(x) - nq(x) = -3x^2 - 4x - 11] \\ .5 = [p(x)\,q(x) = 3x^4 + 2x^3 - 17x^2 - 10x + 10] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{bmatrix}$$

$$Ans3 = [p(x)\,q(x) = x^5 - 3x^4 + 8x^3 - 21x^2 + 21x - 6]$$

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

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

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

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Real01 Answers for No.10120

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

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

$$Ans3 = [p(x)\,q(x) = x^5 - 14x^3 - 13x^2 - 6x - 10]$$

$$Ans4 = [a + b = 6, a\,b = -27], \quad , \quad Ans5 = [a = -4, b = 5, a\,b = -20]$$

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

$$Ans7 = \begin{bmatrix} .1 = \begin{bmatrix} Q(x) = 3x^4 - x^3 - 4 \\ R(x) = 1 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x - 1 \\ R(x) = -4x + 1 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -2x + 1 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 5x + 14 \\ R(x) = -41 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 + 8x \\ R(x) = 16x - 3 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 2 \\ R(x) = 0 \end{bmatrix} \end{bmatrix}$$

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