

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 2x^3 + 3x^2 - 4x + 1 \\ R(x) = 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 4x - 5 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 5 \end{array} \right] \end{array} \right] \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 2x + 3 \\ R(x) = -4x^3 + x^2 + 4 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x^2 + 2x \\ R(x) = -1 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 6 \\ R(x) = 2 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = x^3 + 4x^2 + x - 3 \\ R(x) = 3x \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = x + 4 \\ R(x) = x^3 - 3x^2 + 3x \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 7x - 6 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + x^2 + x - 4 \\ R(x) = 14 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 5 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 12 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 4x^4 - 3x^3 + x^2 + 4x - 1 \\ R(x) = -1 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 4x - 3 \\ R(x) = x^3 + 4x^2 - x - 1 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = x - 2 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x - 8 \\ R(x) = 15 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 - 12x \\ R(x) = 36x + 3 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 8 \\ R(x) = 21 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^4 + x^3 - 4x^2 + 3x - 2 \\ R(x) = -2 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 5x + 1 \\ R(x) = -4x^3 + 3x^2 - 2x - 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 4x - 2 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + x^2 - 2x + 2 \\ R(x) = -8 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 2x \\ R(x) = 2x + 3 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 5 \\ R(x) = 14 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^4 - x^3 - x^2 - 3x + 3 \\ R(x) = 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 4x - 7 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 2 \end{array} \right] \end{array} \right] \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 5x - 1 \\ R(x) = -x^3 - 3x^2 + 3x + 2 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 6x^2 + 15x + 28 \\ R(x) = 52 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 0 \end{array} \right] \end{array} \right]$$

$$Ans2 = \left[\begin{array}{ll} .1 = [p(x) + q(x) = 4x^2 + 5x - 9] & .2 = [p(x) - q(x) = -2x^2 - 5x - 1] \\ .3 = [q(x) - p(x) = 2x^2 + 5x + 1] & .4 = [mp(x) - nq(x) = -11x^2 - 25x] \\ .5 = [p(x)q(x) = 3x^4 + 5x^3 - 19x^2 - 25x + 20] & .6 = [[p(x)]^2 = x^4 - 10x^2 + 25] \end{array} \right]$$

$$Ans4 = [a + b = 8, a b = -9], \quad , \quad Ans5 = [a = 5, b = 1, a b = 5]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^3 - x^2 - x + 3 \\ R(x) = -3x - 2 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 5x - 1 \\ R(x) = -x^3 + 3x^2 - 3x - 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -5x - 1 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 2x^2 - 4x + 7 \\ R(x) = -10 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 - 12x \\ R(x) = 36x - 3 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = -3 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 2x^4 - 2x^3 - 2x^2 - 3x + 2 \\ R(x) = -2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 6x - 3 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 4x \\ R(x) = 8x + 5 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 2x^2 - 2x - 2 \\ R(x) = -3x^2 + 2x - 2 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + x^2 - 2x + 4 \\ R(x) = -4 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 18 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^3 - 4x^2 - 2x - 4 \\ R(x) = x - 4 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 5x^2 - 4x - 2 \\ R(x) = -4x^2 + x - 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -5x - 3 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 - x^2 + 3x - 5 \\ R(x) = 13 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 + 12x \\ R(x) = 36x - 5 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 \\ R(x) = -5 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 3x^4 - x^3 + 3x \\ R(x) = -3 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 3x - 1 \\ R(x) = 3x^2 - 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -5x - 6 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 - x^2 + 2x - 2 \\ R(x) = 5 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 9x \\ R(x) = 27x + 2 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 2 \\ R(x) = 3 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = -2x - 3 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 3x \\ R(x) = -3x^3 - 2x - 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 3x + 7 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 6x^2 + 18x + 54 \\ R(x) = 159 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 - 12x \\ R(x) = 36x + 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 2 \\ R(x) = 1 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 4x^4 + 3x^3 - 4x^2 + 3x - 4 \\ R(x) = 0 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 4x^2 + 3x - 4 \\ R(x) = 3x^2 - 4x \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 2x - 2 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 2x^2 - 6x + 21 \\ R(x) = -64 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 + 6x \\ R(x) = 18x + 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 6 \\ R(x) = 15 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 4x^3 + 4x^2 + 3x + 3 \\ R(x) = -3x + 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 5x - 5 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 6x \\ R(x) = 12x - 4 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 4x^2 + 4x + 3 \\ R(x) = 3x^2 - 3x + 2 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + x^2 - 4x + 14 \\ R(x) = -43 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 1 \\ R(x) = 0 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 2x^3 + 3x^2 - 3x + 4 \\ R(x) = 2x + 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -4x + 5 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 9x \\ R(x) = 27x - 2 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 2x + 3 \\ R(x) = -3x^3 + 4x^2 + 2x + 3 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 6x^2 + 14x + 45 \\ R(x) = 138 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 \\ R(x) = -5 \end{array} \right] \end{array} \right]$$

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

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

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 2x^4 - x^3 - 3x^2 + 3x - 3 \\ R(x) = 0 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -5x + 4 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 - 12x \\ R(x) = 36x + 5 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 2x^2 - x - 3 \\ R(x) = 3x^2 - 3x \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 6x^2 + 13x + 27 \\ R(x) = 50 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 11 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^3 - 2x + 1 \\ R(x) = x \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -6x - 6 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 2 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 5x^2 - 2 \\ R(x) = x^2 + x \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 4x^2 + 12x + 24 \\ R(x) = 46 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 9 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 2x^3 - 2x + 4 \\ R(x) = 3x + 3 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 2x \\ R(x) = -2x^3 + 4x^2 + 3x + 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 6x - 3 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 7x^2 + 18x + 50 \\ R(x) = 154 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 3 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = -10 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 4x^3 - 2x^2 + 3x - 4 \\ R(x) = -3x - 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -x + 6 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 9x \\ R(x) = 27x - 2 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 4x - 2 \\ R(x) = 3x^3 - 4x^2 - 3x - 3 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 7x^2 + 20x + 59 \\ R(x) = 178 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 6 \\ R(x) = 4 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 5x^3 - 4x^2 + 2x + 3 \\ R(x) = 1 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 5x^2 - 4x + 2 \\ R(x) = 3x^2 + 1 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 5x - 5 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x^2 + 6x + 11 \\ R(x) = 26 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 + 12x \\ R(x) = 36x - 3 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 6 \\ R(x) = 9 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 3x^4 - 3x^3 + x^2 + 3x + 3 \\ R(x) = -3 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 3x^2 - 3x + 1 \\ R(x) = 3x^2 + 3x - 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -7x + 4 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 7x^2 + 24x + 76 \\ R(x) = 225 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 9x \\ R(x) = 27x - 4 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 - 1 \\ R(x) = 0 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 5x^3 - 2x^2 - 3x \\ R(x) = -x + 1 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 5x - 2 \\ R(x) = -3x^3 - x + 1 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 2x + 1 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 - 4 \\ R(x) = 10 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 + 12x \\ R(x) = 36x + 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 3 \\ R(x) = -3 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 4x^3 - 3x^2 + 4x - 2 \\ R(x) = 4x + 1 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 4x^2 - 3x + 4 \\ R(x) = -2x^2 + 4x + 1 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -x - 4 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x^2 - 5x + 12 \\ R(x) = -25 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 4 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 17 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \begin{bmatrix} Q(x) = x^3 + 4x^2 + 3x + 4 \\ R(x) = -3x + 3 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = x^2 + 4x + 3 \\ R(x) = 4x^2 - 3x + 3 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = -5x - 3 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 2x^2 - 7x + 11 \\ R(x) = -23 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 4x^3 - 8x \\ R(x) = 16x + 5 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 6 \\ R(x) = 4 \end{bmatrix} \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \begin{bmatrix} Q(x) = 3x^4 + 2x^3 + 2 \\ R(x) = -2 \end{bmatrix} & .2 = \begin{bmatrix} Q(x) = 3x^2 + 2x \\ R(x) = 2x - 2 \end{bmatrix} \\ .3 = \begin{bmatrix} Q(x) = x \\ R(x) = x - 6 \end{bmatrix} & .4 = \begin{bmatrix} Q(x) = x^3 + 6x^2 + 22x + 68 \\ R(x) = 205 \end{bmatrix} \\ .5 = \begin{bmatrix} Q(x) = 3x^3 - 9x \\ R(x) = 27x + 4 \end{bmatrix} & .6 = \begin{bmatrix} Q(x) = x^3 + 3 \\ R(x) = -10 \end{bmatrix} \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 2x^4 + x^3 + x^2 - 2x \\ R(x) = -1 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 2x^2 + x + 1 \\ R(x) = -2x^2 - 1 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 4x + 2 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x^2 + 8x + 16 \\ R(x) = 33 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 6x \\ R(x) = 12x - 2 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 0 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 2x^3 + 4x^2 + 3x + 2 \\ R(x) = -4x \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 4x - 7 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 + 8x \\ R(x) = 16x + 3 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 2x + 4 \\ R(x) = 3x^3 + 2x^2 - 4x \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 2x^2 - 5x + 14 \\ R(x) = -41 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 18 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 4x^4 - 3x^3 - 2x^2 - 3x + 2 \\ R(x) = 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 7x - 4 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 + 4x \\ R(x) = 8x + 3 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 4x - 3 \\ R(x) = -2x^3 - 3x^2 + 2x + 3 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 4x - 8 \\ R(x) = 20 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 12 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = x^4 - x^3 - x - 3 \\ R(x) = 3 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = x - 1 \\ R(x) = -x^2 - 3x + 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -4x - 6 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 7x^2 + 20x + 56 \\ R(x) = 166 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 - 8x \\ R(x) = 16x + 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 8 \\ R(x) = 27 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 3x^4 + 2x^3 + 2x^2 + 3x + 2 \\ R(x) = 0 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 3x^2 + 2x + 2 \\ R(x) = 3x^2 + 2x \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -5x - 6 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 6x^2 + 16x + 47 \\ R(x) = 144 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 6x \\ R(x) = 12x + 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 6 \\ R(x) = 12 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 2x^3 - 2x^2 - 3x + 4 \\ R(x) = -2x + 1 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 2x^2 - 2x - 3 \\ R(x) = 4x^2 - 2x + 1 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 7x - 4 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + x^2 + 2 \\ R(x) = -5 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 3 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 2 \\ R(x) = 1 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 4x^3 + 4x^2 + 4x - 3 \\ R(x) = -4x + 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 5x + 5 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 5 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 4x + 4 \\ R(x) = 4x^3 - 3x^2 - 4x + 4 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 8x^2 + 23x + 71 \\ R(x) = 209 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = -13 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 5x^4 + 2x^3 - 2x^2 - 2x \\ R(x) = -2 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 5x^2 + 2x - 2 \\ R(x) = -2x^2 - 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 7x + 6 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 4x^2 + 8x + 21 \\ R(x) = 59 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 2x \\ R(x) = 2x + 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 3 \\ R(x) = 6 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 2x^3 - 4x^2 + 3x \\ R(x) = x + 2 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 2x - 4 \\ R(x) = 3x^3 + x + 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -7x + 2 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 5x^2 + 13x + 39 \\ R(x) = 116 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 6x \\ R(x) = 12x + 2 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 2 \\ R(x) = -7 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^4 + 3x^3 - 2x^2 + x + 1 \\ R(x) = -4 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 5x + 3 \\ R(x) = -2x^3 + x^2 + x - 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -4x + 3 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 4x - 4 \\ R(x) = 10 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 + 9x \\ R(x) = 27x - 2 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 2 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = x^4 + 4x^3 + 2x^2 + 4 \\ R(x) = -3 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = x^2 + 4x + 2 \\ R(x) = 4x - 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -7x - 3 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x^2 - 7x + 14 \\ R(x) = -29 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 - 4x \\ R(x) = 8x - 5 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 11 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = x^3 - 4x^2 + 3x - 1 \\ R(x) = -2x \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = x^2 - 4x + 3 \\ R(x) = -x^2 - 2x \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 5x + 5 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 5x^2 + 6x + 16 \\ R(x) = 31 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 9x \\ R(x) = 27x - 4 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 4 \\ R(x) = 0 \end{array} \right] \end{array} \right]$$

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$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = x^4 - 3x^3 + 2x^2 + x + 3 \\ R(x) = 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -6x - 3 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 4 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = x^2 - 3x + 2 \\ R(x) = x^2 + 3x + 4 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 6x^2 + 16x + 33 \\ R(x) = 67 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 2 \\ R(x) = -4 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = x^4 + 3x^3 + 4x^2 - 3x - 1 \\ R(x) = 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -3x + 7 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 6x \\ R(x) = 12x - 5 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = x^2 + 3x + 4 \\ R(x) = -3x^2 - x + 4 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 5x^2 + 15x + 42 \\ R(x) = 122 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 12 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^4 + 3x^3 - 3x^2 - 4x - 1 \\ R(x) = 3 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 5x + 3 \\ R(x) = -3x^3 - 4x^2 - x + 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 5x - 7 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 - x^2 + x - 4 \\ R(x) = 14 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 4 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 7 \\ R(x) = 8 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 2x^4 - 4x^3 - 3x^2 + 3x \\ R(x) = 4 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 2x^2 - 4x - 3 \\ R(x) = 3x^2 + 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -6x + 1 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 - x^2 + 4 \\ R(x) = -4 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 2x^3 + 6x \\ R(x) = 18x + 3 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 - 1 \\ R(x) = 8 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{ll} .1 = \left[\begin{array}{l} Q(x) = 5x^4 - x^3 - 4x^2 + 3x - 3 \\ R(x) = 4 \end{array} \right] & .2 = \left[\begin{array}{l} Q(x) = 5x^2 - x - 4 \\ R(x) = 3x^2 - 3x + 4 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 4x + 4 \end{array} \right] & .4 = \left[\begin{array}{l} Q(x) = x^3 + 2x^2 - 7x + 13 \\ R(x) = -27 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 4x^3 + 12x \\ R(x) = 36x + 3 \end{array} \right] & .6 = \left[\begin{array}{l} Q(x) = x^3 + 5 \\ R(x) = 20 \end{array} \right] \end{array} \right]$$

$$Ans2 = \left[\begin{array}{ll} .1 = [p(x) + q(x) = 4x^2 - 2x + 10] & .2 = [p(x) - q(x) = -2x^2 + 2x] \\ .3 = [q(x) - p(x) = 2x^2 - 2x] & .4 = [mp(x) - nq(x) = -4x^2 + 6x + 10] \\ .5 = [p(x)q(x) = 3x^4 - 2x^3 + 20x^2 - 10x + 25] & .6 = [[p(x)]^2 = x^4 + 10x^2 + 25] \end{array} \right]$$

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

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 5x^4 + 3x^3 + x^2 + x \\ R(x) = 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -7x - 6 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x + 2 \end{array} \right] \end{array} \right. \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 5x + 3 \\ R(x) = x^3 + x^2 + 2 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 3x^2 + 8x + 16 \\ R(x) = 35 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 2 \\ R(x) = 1 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 4x^4 - 3x^3 - 3x^2 + 4x + 4 \\ R(x) = 2 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = -4x - 4 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 2 \end{array} \right] \end{array} \right] \quad \left[\begin{array}{l} .2 = \left[\begin{array}{l} Q(x) = 4x^2 - 3x - 3 \\ R(x) = 4x^2 + 4x + 2 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 7x^2 + 16x + 28 \\ R(x) = 61 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 8 \\ R(x) = 18 \end{array} \right] \end{array} \right]$$

$$Ans7 = \left[\begin{array}{l} .1 = \left[\begin{array}{l} Q(x) = 3x^4 + 4x^3 + 3x + 2 \\ R(x) = -3 \end{array} \right] \\ .2 = \left[\begin{array}{l} Q(x) = 3x + 4 \\ R(x) = 3x^2 + 2x - 3 \end{array} \right] \\ .3 = \left[\begin{array}{l} Q(x) = x \\ R(x) = 2x - 5 \end{array} \right] \\ .4 = \left[\begin{array}{l} Q(x) = x^3 + 5x^2 + 6x + 8 \\ R(x) = 12 \end{array} \right] \\ .5 = \left[\begin{array}{l} Q(x) = 3x^3 - 3x \\ R(x) = 3x - 4 \end{array} \right] \\ .6 = \left[\begin{array}{l} Q(x) = x^3 + 3 \\ R(x) = -8 \end{array} \right] \end{array} \right]$$

[illegible]