

অনুশীলনী-৩.৩ : উৎপাদকে বিশ্লেষণ

১. $ab(x - y) - bc(x - y)$

সমাধানঃ

$$ab(x - y) - bc(x - y)$$

$$= b\{a(x - y) - c(x - y)\} \text{ [কমন]}$$

$$= b(x - y)(a - c) \text{ [কমন]}$$

২. $9x^2 + 24x + 16$

সমাধানঃ

$$9x^2 + 24x + 16$$

$$= (3x)^2 + 2 \cdot (3x) \cdot 4 + 4^2$$

$$= (3x + 4)^2 \text{ [সূত্র } (a + b)^2 = a^2 + 2ab + b^2]$$

$$= (3x + 4)(3x + 4)$$

৩. $a^4 - 27a^2 + 1$

সমাধানঃ

$$a^4 - 27a^2 + 1$$

$$= a^4 - 2a^2 + 1 - 25a^2$$

$$= (a^2)^2 - 2 \cdot a^2 \cdot 1 + 1^2 - 25a^2$$

$$= (a^2 - 1)^2 - (5a)^2 \text{ [সূত্র } (a - b)^2 = a^2 - 2ab + b^2]$$

$$= (a^2 - 1 + 5a)(a^2 - 1 - 5a) \text{ [সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$= (a^2 + 5a - 1)(a^2 - 5a - 1)$$

৪. $x^4 - 6x^2y^2 + y^4$

সমাধানঃ

$$x^4 - 6x^2y^2 + y^4$$

$$= x^4 - 2x^2y^2 + y^4 - 4x^2y^2$$

$$= (x^2 - y^2)^2 - (2xy)^2 \text{ [সূত্র } (a - b)^2 = a^2 - 2ab + b^2]$$

$$= (x^2 - y^2 + 2xy)(x^2 - y^2 - 2xy) \text{ [সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$= (x^2 + 2xy - y^2)(x^2 - 2xy - y^2)$$

$$৫. (a^2 - b^2)(x^2 - y^2) + 4abxy$$

সমাধানঃ

$$(a^2 - b^2)(x^2 - y^2) + 4abxy$$

$$= a^2x^2 - a^2y^2 - b^2x^2 + b^2y^2 + 4abxy$$

$$= (a^2x^2 + 2abxy + b^2y^2) - (a^2y^2 - 2abxy + b^2x^2)$$

$$= (ax + by)^2 - (ay - bx)^2 \quad [\sqrt{a^2 + 2ab + b^2} = a + b] \quad [\sqrt{a^2 - 2ab + b^2} = a - b]$$

$$= \{(ax + by) + (ay - bx)\} \{(ax + by) - (ay - bx)\} \quad [\sqrt{a^2 - b^2} = (a + b)(a - b)]$$

$$= (ax + by + ay - bx)(ax + by - ay + bx)$$

$$৬. 4a^2 - 12ab + 9b^2 - 4c^2$$

সমাধানঃ

$$4a^2 - 12ab + 9b^2 - 4c^2$$

$$= (2a)^2 - 2 \cdot 2a \cdot 3b + (3b)^2 - 4c^2$$

$$= (2a - 3b)^2 - (2c)^2 \quad [\sqrt{a^2 - 2ab + b^2} = a - b]$$

$$= (2a - 3b + 2c)(2a - 3b - 2c) \quad [\sqrt{a^2 - b^2} = (a + b)(a - b)]$$

$$৭. a^2 + 6a + 8 - y^2 + 2y$$

সমাধানঃ

$$a^2 + 6a + 8 - y^2 + 2y$$

$$= a^2 + 6a + 9 - 1 - y^2 + 2y$$

$$= a^2 + 2 \cdot a \cdot 3 + 3^2 - (1 + y^2 - 2y)$$

$$= (a + 3)^2 - (y^2 - 2 \cdot y \cdot 1 + 1^2) \quad [\sqrt{a^2 + 2ab + b^2} = a + b]$$

$$= (a + 3)^2 - (y - 1)^2 \quad [\sqrt{a^2 - 2ab + b^2} = a - b]$$

$$= \{(a + 3) + (y - 1)\} \{(a + 3) - (y - 1)\} \quad [\sqrt{a^2 - b^2} = (a + b)(a - b)]$$

$$= (a + 3 + y - 1)(a + 3 - y + 1)$$

$$= (a + y + 2)(a - y + 4)$$

$$৮. 16x^2 - 25y^2 - 8xz + 10yz$$

সমাধানঃ

$$16x^2 - 25y^2 - 8xz + 10yz$$

$$= (4x)^2 - (5y)^2 - 2z(4x - 5y) \quad [\text{কমন}]$$

$$= (4x + 5y)(4x - 5y) - 2z(4x - 5y) \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$= (4x - 5y)(4x + 5y - 2z)$$

$$৯. x^2 + 13x + 36$$

সমাধানঃ

$$x^2 + 13x + 36$$

$$= x^2 + 9x + 4x + 36 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= x(x + 9) + 4(x + 9) \quad [\text{কমন}]$$

$$= (x + 4)(x + 9) \quad [\text{কমন}]$$

$$১০. x^4 + x^2 - 20$$

সমাধানঃ

$$x^4 + x^2 - 20$$

$$= x^4 + 5x^2 - 4x^2 - 20 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= x^2(x^2 + 5) - 4(x^2 + 5) \quad [\text{কমন}]$$

$$= (x^2 + 5)(x^2 - 4) \quad [\text{কমন}]$$

$$= (x^2 - 2^2)(x^2 + 5)$$

$$= (x + 2)(x - 2)(x^2 + 5) \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$১১. a^2 - 30a + 216$$

সমাধানঃ

$$a^2 - 30a + 216$$

$$= a^2 - 18a - 12a + 216 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= a(a - 18) - 12(a - 18) \quad [\text{কমন}]$$

$$= (a - 18)(a - 12) \quad [\text{কমন}]$$

$$১২. a^8 - a^4 - 2$$

সমাধানঃ

$$a^8 - a^4 - 2$$

$$= a^8 - 2a^4 + a^4 - 2 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= a^4(a^4 - 2) + 1(a^4 - 2) \quad [\text{কমন}]$$

$$= (a^4 - 2)(a^4 + 1) \quad [\text{কমন}]$$

$$১৩. x^2 - 37x - 650$$

সমাধানঃ

$$x^2 - 37x - 650$$

$$= x^2 - 50x + 13x - 650 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= x(x - 50) + 13(x - 50) \quad [\text{কমন}]$$

$$= (x - 50)(x + 13) \quad [\text{কমন}]$$

$$১৪. 9x^2y^2 - 5xy^2 - 14y^2$$

সমাধানঃ

$$9x^2y^2 - 5xy^2 - 14y^2$$

$$= y^2(9x^2 - 5x - 14) \quad [\text{কমন}]$$

$$= y^2(9x^2 - 14x + 9x - 14) \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= y^2\{x(9x - 14) + 1(9x - 14)\} \quad [\text{কমন}]$$

$$= y^2(9x - 14)(x + 1) \quad [\text{কমন}]$$

$$১৫. 4x^4 - 27x^2 - 81$$

সমাধানঃ

$$4x^4 - 27x^2 - 81$$

$$= 4x^4 - 36x^2 + 9x^2 - 81 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= 4x^2(x^2 - 9) + 9(x^2 - 9) \quad [\text{কমন}]$$

$$= (x^2 - 9)(4x^2 + 9) \quad [\text{কমন}]$$

$$= (x^2 - 3^2)(4x^2 + 9)$$

$$= (x + 3)(x - 3)(4x^2 + 9) \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$১৬. ax^2 + (a^2 + 1)x + a$$

সমাধানঃ

$$ax^2 + (a^2 + 1)x + a$$

$$= ax^2 + a^2x + x + a$$

$$= ax(x + a) + 1(x + a) \quad [\text{কমন}]$$

$$= (x + a)(ax + 1) \quad [\text{কমন}]$$

$$১৭. 3(a^2 + 2a)^2 - 22(a^2 + 2a) + 40$$

সমাধানঃ

$$\text{ধরি, } a^2 + 2a = m$$

$$3(a^2 + 2a)^2 - 22(a^2 + 2a) + 40$$

$$= 3m^2 - 22m + 40$$

$$= 3m^2 - 12m - 10m + 40 \quad [\text{মিডল টার্ম ব্রেক}]$$

$$= 3m(m - 4) - 10(m - 4) \quad [\text{কমন}]$$

$$= (m - 4)(3m - 10) \quad [\text{কমন}]$$

$$= (a^2 + 2a - 4)\{3(a^2 + 2a) - 10\} \quad [a^2 + 2a = m \text{ বসিয়ে}]$$

$$= (a^2 + 2a - 4)(3a^2 + 6a - 10)$$

$$১৮. (a - 1)x^2 + a^2xy + (a + 1)y^2$$

সমাধানঃ

$$(a - 1)x^2 + a^2xy + (a + 1)y^2$$

$$= (a - 1)x^2 + (a^2 - 1)xy + xy + (a + 1)y^2 \quad [\text{মিডল টার্ম ব্রেকঃ } (a + 1)(a - 1) = a^2 - 1 \text{ তাহলে পদ দুইটি } a^2 - 1 \text{ এবং } 1 \text{। অর্থাৎ } (a^2 - 1)xy + xy = a^2xy - xy + xy = a^2xy]$$

$$= (a - 1)x^2 + (a^2 - 1^2)xy + xy + (a + 1)y^2$$

$$= (a - 1)x^2 + (a + 1)(a - 1)xy + xy + (a + 1)y^2 \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$= (a - 1)x\{x + (a + 1)y\} + y\{x + (a + 1)y\} \quad [\text{কমন}]$$

$$= \{x + (a + 1)y\}\{(a - 1)x + y\} \quad [\text{কমন}]$$

$$= (x + ay + y)(ax - x + y)$$

$$১৯. x^3 + 3x^2 + 3x + 2$$

সমাধানঃ

$$x^3 + 3x^2 + 3x + 2$$

$$= x^3 + 3x^2 + 3x + 1 + 1$$

$$= x^3 + 3 \cdot x^2 \cdot 1 + 3 \cdot x \cdot 1^2 + 1^3 + 1$$

$$= (x + 1)^3 + 1^3 \quad [\text{সূত্র } (a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3]$$

$$= (x + 1 + 1)\{(x + 1)^2 - (x + 1) \cdot 1 + 1^2\} \quad [\text{সূত্র } a^3 + b^3 = (a + b)(a^2 - ab + b^2)]$$

$$= (x+2) \{ x^2 + 2 \cdot x \cdot 1 + 1^2 - (x+1) + 1 \} \quad [\text{সূত্র } (a+b)^2 = a^2 + 2ab + b^2]$$

$$= (x+2)(x^2 + 2x + 1 - x - 1 + 1)$$

$$= (x+2)(x^2 + x + 1)$$

$$\text{২০. } a^3 - 6a^2 + 12a - 9$$

সমাধানঃ

$$a^3 - 6a^2 + 12a - 9$$

$$= a^3 - 6a^2 + 12a - 8 - 1$$

$$= a^3 - 3 \cdot a^2 \cdot 2 + 3 \cdot a \cdot 2^2 - 2^3 - 1$$

$$= (a-2)^3 - 1^3 \quad [\text{সূত্র } (a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3]$$

$$= (a-2-1) \{ (a-2)^2 + (a-2) \cdot 1 + 1^2 \} \quad [\text{সূত্র } a^3 - b^3 = (a-b)(a^2 + ab + b^2)]$$

$$= (a-3)(a^2 - 2 \cdot a \cdot 2 + 2^2 + a - 2 + 1) \quad [\text{সূত্র } (a-b)^2 = a^2 - 2ab + b^2]$$

$$= (a-3)(a^2 - 4a + 4 + a - 1)$$

$$= (a-3)(a^2 - 3a + 3)$$

$$\text{২১. } a^3 - 9b^3 + (a+b)^3$$

সমাধানঃ

$$a^3 - 9b^3 + (a+b)^3$$

$$= a^3 - b^3 + (a+b)^3 - 8b^3$$

$$= a^3 - b^3 + (a+b)^3 - (2b)^3$$

$$= (a-b)(a^2 + ab + b^2) + (a+b-2b)\{(a+b)^2 + 2b(a+b) + 4b^2\}$$

$$[\text{সূত্র } a^3 - b^3 = (a-b)(a^2 + ab + b^2)]$$

$$= (a-b)(a^2 + ab + b^2) + (a-b)(a^2 + 2ab + b^2 + 2ab + 2b^2 + 4b^2) \quad [\text{সূত্র } (a+b)^2 = a^2 + 2ab + b^2]$$

$$= (a-b)(a^2 + ab + b^2) + (a-b)(a^2 + 4ab + 7b^2)$$

$$= (a-b)\{a^2 + ab + b^2 + a^2 + 4ab + 7b^2\} \quad [\text{কমন}]$$

$$= (a-b)(2a^2 + 5ab + 8b^2)$$

$$\text{২২. } 8x^3 + 12x^2 + 6x - 63$$

সমাধানঃ

$$8x^3 + 12x^2 + 6x - 63$$

$$= (2x)^3 + 3 \cdot (2x)^2 \cdot 1 + 3 \cdot 2x \cdot 1^2 + 1^3 - 64$$

$$= (2x + 1)^3 - 64 \quad [\text{সূত্র } (a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3]$$

$$= (2x + 1)^3 - 4^3$$

$$= (2x + 1 - 4)\{(2x + 1)^2 + 4(2x + 1) + 4^2\} \quad [\text{সূত্র } a^3 - b^3 = (a - b)(a^2 + ab + b^2)]$$

$$= (2x - 3)\{(2x)^2 + 2 \cdot 2x \cdot 1 + 1^2 + 8x + 4 + 16\} \quad [\text{সূত্র } (a + b)^2 = a^2 + 2ab + b^2]$$

$$= (2x - 3)(4x^2 + 4x + 1 + 8x + 20)$$

$$= (2x - 3)(4x^2 + 12x + 21)$$

$$\text{২৩. } 8a^3 + \frac{b^3}{27}$$

সমাধানঃ

$$8a^3 + \frac{b^3}{27}$$

$$= (2a)^3 + \left(\frac{b}{3}\right)^3$$

$$= \left(2a + \frac{b}{3}\right)\{(2a)^2 - 2a \cdot \frac{b}{3} + \left(\frac{b}{3}\right)^2\} \quad [\text{সূত্র } a^3 + b^3 = (a + b)(a^2 - ab + b^2)]$$

$$= \left(2a + \frac{b}{3}\right)\left(4a^2 - \frac{2ab}{3} + \frac{b^2}{9}\right)$$

$$= \left(\frac{6a+b}{3}\right)\left(\frac{36a^2-6ab+b^2}{9}\right)$$

$$= \frac{(6a + b)(36a^2 - 6ab + b^2)}{27}$$

$$= \frac{1}{27}(6a + b)(36a^2 - 6ab + b^2)$$

$$\text{২৪. } \frac{a^6}{27} - b^6$$

সমাধানঃ

$$\frac{a^6}{27} - b^6$$

$$= \left(\frac{a^2}{3}\right)^3 - (b^2)^3$$

$$= \left(\frac{a^2}{3} - b^2\right)\left\{\left(\frac{a^2}{3}\right)^2 + \frac{a^2}{3} \cdot b^2 + (b^2)^2\right\} \quad [\text{সূত্র } a^3 - b^3 = (a - b)(a^2 + ab + b^2)]$$

$$= \left(\frac{a^2}{3} - b^2\right)\left(\frac{a^4}{9} + \frac{a^2b^2}{3} + b^4\right)$$

$$= \left(\frac{a^2 - 3b^2}{3} \right) \left(\frac{a^4 + 3a^2b^2 + 9b^4}{9} \right)$$

$$= \frac{(a^2 - 3b^2)(a^4 + 3a^2b^2 + 9b^4)}{27}$$

$$= \frac{1}{27} (a^2 - 3b^2)(a^4 + 3a^2b^2 + 9b^4)$$

$$\text{২৫. } 4a^2 + \frac{1}{4a^2} - 2 + 4a - \frac{1}{a}$$

সমাধানঃ

$$4a^2 + \frac{1}{4a^2} - 2 + 4a - \frac{1}{a}$$

$$= 4a^2 - 2 + \frac{1}{4a^2} + 4a - \frac{1}{a}$$

$$= (2a)^2 - 2.2a \cdot \frac{1}{2a} + \frac{1}{(2a)^2} + 4a - \frac{1}{a}$$

$$= \left(2a - \frac{1}{2a} \right)^2 + 2 \left(2a - \frac{1}{2a} \right) \quad [\text{সূত্র } (a - b)^2 = a^2 - 2ab + b^2] \quad \text{এবং} \quad [\text{কমন}]$$

$$= \left(2a - \frac{1}{2a} \right) \left(2a - \frac{1}{2a} + 2 \right) \quad [\text{কমন}]$$

$$= \frac{4a^2 - 1}{2a} \cdot \frac{4a^2 - 1 + 4a}{2a}$$

$$= \frac{(2a)^2 - 1^2}{2a} \cdot \frac{4a^2 + 4a - 1}{2a}$$

$$= \frac{(2a+1)(2a-1)(4a^2 + 4a - 1)}{4a^2} \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)]$$

$$\text{২৬. } (3a + 1)^3 - (2a - 3)^3$$

সমাধানঃ

$$(3a + 1)^3 - (2a - 3)^3$$

$$= \{(3a + 1) - (2a - 3)\} \{(3a + 1)^2 + (3a + 1)(2a - 3) + (2a - 3)^2\}$$

$$[\text{সূত্র } a^3 - b^3 = (a - b)(a^2 + ab + b^2)]$$

$$= (3a + 1 - 2a + 3) \{(3a)^2 + 2.3a.1 + 1^2 + (3a.2a - 3a.3 + 1.2a - 1.3) + (2a)^2 - 2.2a.3 + 3^2\}$$

$$= (a + 4) \{(9a^2 + 6a + 1) + (6a^2 - 9a + 2a - 3) + (4a^2 - 12a + 9)\}$$

$$= (a + 4)(19a^2 - 13a + 7)$$

$$\text{২৭. } (x + 2)(x + 3)(x + 4)(x + 5) - 48$$

সমাধানঃ

$$\begin{aligned}& (x+2)(x+3)(x+4)(x+5) - 48 \\&= (x+2)(x+5)(x+3)(x+4) - 48 \\&= (x^2 + 5x + 2x + 10)(x^2 + 4x + 3x + 12) - 48 \\&= (x^2 + 7x + 10)(x^2 + 7x + 12) - 48 \\&= (a + 10)(a + 12) - 48 \quad [\text{ধরি, } x^2 + 7x = a] \\&= a^2 + 12a + 10a + 120 - 48 \\&= a^2 + 22a + 72 \\&= a^2 + 18a + 4a + 72 \quad [\text{মিডল টার্ম ব্রেক}] \\&= a(a + 18) + 4(a + 18) \\&= (a + 18)(a + 4) \\&= (x^2 + 7x + 18)(x^2 + 7x + 4) \quad [a = x^2 + 7x, \text{ বসিয়ে}]\end{aligned}$$

$$২৮. (x-1)(x-3)(x-5)(x-7) - 65$$

সমাধানঃ

$$\begin{aligned}& (x-1)(x-3)(x-5)(x-7) - 65 \\&= (x-1)(x-7)(x-3)(x-5) - 65 \\&= (x^2 - 7x - x + 7)(x^2 - 5x - 3x + 15) - 65 \\&= (x^2 - 8x + 7)(x^2 - 8x + 15) - 65 \\&= (a + 7)(a + 15) - 65 \quad [\text{ধরি, } x^2 - 8x = a] \\&= a^2 + 15a + 7a + 105 - 65 \\&= a^2 + 22a + 40 \\&= a^2 + 20a + 2a + 40 \quad [\text{মিডল টার্ম ব্রেক}] \\&= a(a + 20) + 2(a + 20) \\&= (a + 20)(a + 2) \\&= (x^2 - 8x + 20)(x^2 - 8x + 2) \quad [a = x^2 - 8x, \text{ বসিয়ে}]\end{aligned}$$

$$২৯. 2b^2c^2 + 2c^2a^2 + 2a^2b^2 - a^4 - b^4 - c^4$$

সমাধানঃ

$$\begin{aligned}
& 2b^2c^2 + 2c^2a^2 + 2a^2b^2 - a^4 - b^4 - c^4 \\
&= 4a^2b^2 - a^4 - b^4 - c^4 - 2a^2b^2 + 2b^2c^2 + 2c^2a^2 \\
&= 4a^2b^2 - (a^4 + b^4 + c^4 + 2a^2b^2 - 2b^2c^2 - 2c^2a^2) \\
&= 4a^2b^2 - \{(a^2)^2 + (b^2)^2 + (-c^2)^2 + 2a^2b^2 + 2b^2(-c^2) + 2(-c^2)a^2\} \\
&= 4a^2b^2 - \{a^2 + b^2 + (-c^2)\}^2 \quad [\text{সূত্র, } (a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca] \\
&= 4a^2b^2 - (a^2 + b^2 - c^2)^2 \\
&= (2ab)^2 - (a^2 + b^2 - c^2)^2 \\
&= \{2ab + (a^2 + b^2 - c^2)\}\{2ab - (a^2 + b^2 - c^2)\} \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)] \\
&= \{(a^2 + 2ab + b^2) - c^2\}(2ab - a^2 - b^2 + c^2) \\
&= \{(a + b)^2 - c^2\}(c^2 - a^2 + 2ab - b^2) \\
&= \{(a + b)^2 - c^2\}\{c^2 - (a^2 - 2ab + b^2)\} \\
&= \{(a + b)^2 - c^2\}\{c^2 - (a - b)^2\} \\
&= \{a + b + c\}\{a + b - c\}\{c + (a - b)\}\{c - (a - b)\} \quad [\text{সূত্র } a^2 - b^2 = (a + b)(a - b)] \\
&= (a + b + c)(a + b - c)(c + a - b)(c - a + b)
\end{aligned}$$

৩০. $14(x + z)^2 - 29(x + z)(x + 1) - 15(x + 1)^2$

সমাধানঃ

$$\begin{aligned}
& 14(x + z)^2 - 29(x + z)(x + 1) - 15(x + 1)^2 \\
&= 14a^2 - 29ab - 15b^2 \quad [\text{ধরি, } x + z = a, \text{ এবং } x + 1 = b] \\
&= 14a^2 - 35ab + 6ab - 15b^2 \quad [\text{মিডল টার্ম ব্রেক}] \\
&= 7a(2a - 5b) + 3b(2a - 5b) \\
&= (2a - 5b)(7a + 3b) \\
&= \{2(x + z) - 5(x + 1)\}\{7(x + z) + 3(x + 1)\} \quad [a = x + z, \text{ এবং } b = x + 1 \text{ বসিয়ে}] \\
&= (2x + 2z - 5x - 5)(7x + 7z + 3x + 3) \\
&= (2z - 3x - 5)(10x + 7z + 3)
\end{aligned}$$

৩১. দেখাও যে, $(x + 1)(x + 2)(3x - 1)(3x - 4) = (3x^2 + 2x - 1)(3x^2 + 2x - 8)$

সমাধানঃ

$$\text{এখানে, } (x + 1)(3x - 1)$$

$$= 3x^2 - x + 3x - 1$$

$$= 3x^2 + 2x - 1$$

$$\text{এবং } (x + 2)(3x - 4)$$

$$= 3x^2 - 4x + 6x - 8$$

$$= 3x^2 + 2x - 8$$

সুতরাং

$$(x + 1)(x + 2)(3x - 1)(3x - 4)$$

$$= (x + 1)(3x - 1)(x + 2)(3x - 4)$$

$$= (3x^2 + 2x - 1)(3x^2 + 2x - 8)$$

$$\text{তাহলে, } (x + 1)(x + 2)(3x - 1)(3x - 4) = (3x^2 + 2x - 1)(3x^2 + 2x - 8)$$

(দেখানো হল)