(vi) $-6x^2y$ and $3xyz^2$

Sol: $= (-6x^2y)(3xyz^2)$

$= -18x^3y^2z^2$

(vii) $2a^2b$ and $5a^2b^3$

Sol: $= (2a^2b)(5a^2b^3)$

$= 10a^4b^5$

(viii) l^2mn and lm^3n^6

Sol: $= (l^2mn)(lm^3n^6)$

$= l^3m^4n^7$

(ix) $-4x^2y^3z^7$ and $8xy^4z^3$

Sol: $= (-4x^2y^3z^7)(8xy^4z^3)$

$= -32x^3y^6z^{10}$

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Q#2. Simplify

(i) $lm(l+m)$

Sol: $= l^2m + lm^2$

(ii) $2p(p+q)$

Sol:

$= 2p^2 + 2pq$

8.4 (Pg 3)

Q#2: Simplify

(i) $(x^2+y^2)(3x+2y)+xy(x-3y)$

Sol: $= 3x^3+2x^2y+3xy^2+2y^3+x^2y-3xy^2$

$= 3x^3+3x^2y+2y^3$

(ii) $(4x+3y)(2x-y)-(3x-2y)(x+y)$

Sol: $= 8x^2-4xy+6xy-3y^2-(3x^2+3xy-2xy-2y^2)$

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

$= 6x^2+xy-y^2$

(iii) $(2m^2-5m+4)(m+2)-(m^2+7m-8)(2m-3)$

Sol: $= 2m^3+4m^2-5m^2-10m+4m+8-(2m^3-3m^2+14m^2-21m+24)$

(iv) $= 2m^3-3m^2-6m+8-2m^3-11m^2+21m-24)$

$= -14m^2+15m-16$

(iv) $(3x^2+2xy-2y^2)(x+y)-(x^2-xy+y^2)(x-y)$

Sol: $= 3x^3+3x^2y+2x^2y+2xy^2-2xy^2-2y^3-(x^3-x^2y-x^2y+xy^2+xy^2-y^3)$

$= 3x^3+5x^2y-2y^3-x^3+2x^2y-2xy^2+y^3$

$= 2x^3+7x^2y-2xy^2-y^3$

·x· ——— ·x·

7th Class (Maths)

Unit # 8

Exercise # 8.3 (pg 1)

Q#1: Multiply.

(i) $7m$ and -8

Sol: $= (7m)(-8)$

$= -56m$

(ii) $2ab$ and $3a^2b^2$

Sol: $= (2ab)(3a^2b^2)$

$= 6a^3b^3$

(iii) $4xy$ and $2x^2y$

Sol: $= (4xy)(2x^2y)$

$= 8x^3y^2$

(iv) $-4ab$ and $-2bc$

Sol: $= (-4ab)(-2bc)$

$= 8ab^2c$

(v) $3lm^3$ and $3mn$

Sol: $= (3lm^3)(3mn)$

$= 9lm^4n$

8.3 (Pg 3)

(iii) $3a(a-b)$

Sol: $= 3a^2 - 3ab$

(iv) $2x(3x+4y)$

Sol: $= 6x^2 + 8xy$

(v) $2a(2b-2c)$

Sol: $= 4ab - 4ac$

(vi) $2lm(l^2m^2 - n)$

Sol: $= 2l^3m^3 - 2lmn$

(vii) $a(a+b-c)$

Sol: $= a^2 + ab - ac$

(viii) $3x(x-2y-2z)$

Sol: $= 3x^2 - 6xy - 6xz$

(ix) $3p^2q(p^3+q^2-r^4)$

Sol:

$= 3p^5q + 3p^2q^3 - 3p^2qr^4$

·X· ——— ·X·

(vi) $(a+b)(a-b)$

Sol.: $= a(a-b) + b(a-b)$

$= a^2 - ab + ab - b^2$

$= a^2 - b^2$

(vii) $(l-m)(l^2 - 2lm + m^3)$

Sol.: $= l(l^2 - 2lm + m^3) - m(l^2 - 2lm + m^3)$

$= l^3 - 2l^2m + lm^3 - l^2m + 2lm^2 - m^4$

$= l^3 - 3l^2m + 3lm^2 - m^4$

(viii) $(3p - 4q)(3p + 4q)$

Sol.: $= 9p^2 + 12pq - 12pq - 16q^2)$

$= 9p^2 - 16q^2$

(ix) $(1-2c)(1+2c)$

Sol.: $= 1 + 2c - 2c - 4c^2$

$= 1 - 4c^2$

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

Sol.: $= 8x^3 + 4x^2 + 2x - 4x^2 - 2x - 1$

$= 8x^3 - 1$

(xi) $(a+b)(a^2 - ab + b^2)$

Sol.: $= a^3 - a^2b + ab^2 + a^2b - ab^2 + b^3$

$= a^3 + b^3$

Exercise # 8.4. Pg 1

Q#1:

Multiply

(i) $(3a+4)(2a-1)$

Sol: $= 3a(2a-1) + 4(2a-1)$

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

$= 6a^2 + 5a - 4$

(ii) $(m+2)(m-2)$

Sol: $= m^2 - 2m + 2m - 4$

$= m^4 - 4$

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

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

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

$= x^3 - 1$

(iv) $(p-q)(p^2+pq+q^2)$

Sol: $= p(p^2+pq+q^2) - q(p^2+pq+q^2)$

$= p^3 + p^2q + pq^2 - p^2q - pq^2 - q^3$

$= p^3 - q^3$

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

Sol: $= x^3 - x^2y + xy^2 + x^2y - xy^2 + y^3$

$= x^3 + y^3$