2. i) $4x \times 6x \times 2 = 48x^2$

ii) $3ab \times 6a \times = 18a^2bx$

iii) $1 \times \times 2x^2 \times 6x^2y^2 = 6x^6$

iv) $5 \times 5a^3 = 25a^3$

v) $6 \times 6x^2 \times 6x^2y^2 = 216x^4y^2$

vi) $-8x \times -3x = 24x^2$

vii) $-5x - 3x \times 5x^2 = 75x^3$

viii) $8x - 4xy^2 \times 3x^3y^2 = -96x^4y^4$

ix) $1 - 4x \times 5xy \times 3z = -60x^2yz$

x) $15 \times \times 2x^2y \times -7y^3 \times 2x^3y^2 = -140x^6y^6$

3 (i) $15x^7$

(ii) $35a^9$

(iii) $18a^2bc^4$

(iv) $5a^5b^6$

(v) $10x^5y^7$

(vi) ab^2c^2d

7. i) $(x+2)\times(x+10)$

$= x(x+10)+2(x+10)$

$= x^2+10x+2x+20$

$= x^2+12x+20$

ii) $(x+5)\times(x-3)$

$= x(x-3)+5(x-3)$

$= x^2-3x+5x-15$

$= x^2+2x-15$

iii) $(x-5)\times(x+3)$

$= x(x+3)-5(x+3)$

$= x^2+3x-5x-15$

$= x^2-2x-15$

iv) $(x-5)\times(x-3)$

$= x(x-3)-5(x-3)$

$= x^2-3x-5x+15$

$= x^2-8x+15$

v) $(2x+y)\times(x+3y)$

$= 2x(x+3y)+y(x+3y)$

$= 2x^2+6xy+yx+3y^2$

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

vi) $(3x-5y)\times(x+6y)$

$= 3x(x+6y)-5y(x+6y)$

$= 3x^2+18xy-5yx+30y^2$

$= 3x^2+13xy+30y^2$

vii) $(x+9y)\times(x-5y)$

$= x(x-5y)+9y(x-5y)$

$= x^2-5yx+9yx-4y$

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

2. i) $2x^5 \div x^2 = 2x^3$

ii) $\frac{8a^8}{3a^3} = 2 \times a^{8-3} = 2a^5$

iii) $\frac{20xy}{-5xy} = -4 \times x \times y = -4xy$

iv) $\frac{-24a^2b^2c^2}{6ab} = -4 \times a^{2-1} \times b^{2-1} \times c^2 = 4ab \; 4abc^2$

v) $\frac{-5x^2y}{xy^2} = -5 \times x^{2-1} y^{2-1} = -5xy^2$

vi) $\frac{40p^3q^4r^5}{10p^3q} = 4 \times p^3 \times q^4 \times r^5 = 4p^3q^4r^5$

vii) $\frac{-64x^4y^3z}{4x^3y^2z} = -16 \times x^{4-3} \times y^{3-2} \times z = -16x \; 16xyz$

xxiii) $\frac{5x^5y^5}{x^4y^4} = 5x^{5-4}y^{5-4} = 5x^1y^1$

31) $\frac{3m}{4} \div \frac{2n}{1}$

$\frac{3m}{4} \times \frac{1}{2n} = \frac{3}{8}$

xxii) $-15p^6q^8 \div 5p^6q^7$

$\frac{-15p^6q^8}{5p^6q^7} = -3pq$

xxiii) $-21m^5n^7 \div 14m^2n^2$

$\frac{-21m^5n^7}{14m^2n^2} = -7m^3n^5$

xxiv) $-24a^2b^2c^2 \div 6ab$

$\frac{-24a^2b^2c^2}{6ab} = -4abc^2$

xxv) $20x^3a^6 \div 5xy$

$\frac{20x^3a^6}{5xy} = 4x^3a^6y$

xxvi) $\frac{28a^2b^3}{c^2} \times \frac{1}{4ab^2c} = \frac{28a^2b^3}{4abc^3} = \frac{7a^1b^1}{c^1}$

xxvii) $\frac{2a^2}{9b^2} \times \frac{2a}{3b} = \frac{4a^3}{27b^3}$

xxviii) $\frac{-5 \cdot 5x^2}{y} \times \frac{y}{11x} = \frac{-5 \cdot 5x^2y}{11xy} = \frac{-5 \cdot 5x^1y^0}{11}$