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Exercise 19(c)

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

ii) $18a^2bx$

iii) $6x^6$

iv) $25a^3$

v) $216x^4y^2$

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

vii) $75x^3$

viii) $-96x^4y^4$

ix) $-60x^2yz$

x) $-140x^6y^6$

3.i) $2x^3 \times 5x^4$

$= 15x^7$

ii) $5a^2 \times 7a^7$

$= 35a^9$

iii) $3abc \times 6ac^3$

$= 18a^2bc^4$

iv) $a^2b^2 \times 5a^3b^4$

$= 5a^5b^6$

v) $2x^2y^3 \times 5x^3y^4$

$= 10x^5y^7$

vi) $abc \times bcd$

$= ab^2c^2d$

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

$= x^2 + 12x + 20$

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

$= x^2+2x-15$

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

$= x^2-2x-15$

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

$= x^2-8x+15$

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

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

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

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

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

$= x^2+4xy-45y^2$

viii) $2x+5y \times 2x+5y$

$= 4x^2+20xy+25y^2$

Exercise 19(D)

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

$= \frac{2x^5}{x^2} = 2x^{5-2} = 2x^3$

ii) $6a^8 \div 3a^3$

$= \frac{6a^8}{3a^3} = 2a^5$

iii) $20xy \div (-5xy)$

$= \frac{20xy}{-5xy} = -4$

iv) $\frac{-24a^2b^2c^2}{8ab} \div -4a^1bc^2$

v) $\frac{-5x^2y}{xy^2} = \frac{-5xy^0}{y}$

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

vii) $\frac{-64x^4y^3z}{4x^3y^2z} \div -16xy$

viii) $\frac{35xy^5}{7x^2y4} \div \frac{5y}{x}$

3. i) $-\frac{3m}{4} \div 2m$

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

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

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

iv) $\frac{36a^4x^5y^6}{4x^2a^3y^2} = 9a^1x^3y^4$

v) $\frac{20x^3a^6}{5xy} = \frac{4x^2a^6}{y}$

vii) $\frac{28a^2b^3}{c^2} \div 4abc$

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

$= \frac{7ab^2}{c^3}$

viii) $\frac{2a^2}{9b^2} \div \frac{3b}{2a}$

$= \frac{2a^2}{9b^2} \times \frac{2a}{3b}$

$= \frac{4a^3}{27b^3}$

ix) $\frac{-5.5x^2}{y} \div \frac{11x}{y}$

$= \frac{-5.5x^2}{y} \times \frac{y}{11x}$

$= \frac{-5.5x^2y}{11xy}$

$= -0.5x$

x) $\frac{64x^2y^2}{z^2} \div \frac{8xy}{z}$

$= \frac{64x^2y^2}{z^2} \times \frac{z}{8xy}$

$= \frac{64x^2y^2z}{8xyz^2} = \frac{8xy}{z}$