Review of Indices

1) $x^p \times x^q = x^{p+q}$

2) $x^p \div x^q = x^{p-q}$

3) $(x^p)^q = x^{p \times q}$

4) $x^0 = 1$

5) $x^1 = x$

6) $x^{-p} = \frac{1}{x^p}$

7) $x^{\frac{1}{p}} = \sqrt[p]{x}$

8) $x^{p/q} = \left(\sqrt[q]{x}\right)^p = \sqrt[q]{x^p}$

Exercise

1) $2y^2 \times 3y^3$

$= 2 \times y^2 \times 3 \times y^3 = 6y^5$

2) $10y^{10} \div 2y^2 = \frac{10y^{10}}{2y^2} = 5y^8$

3) $(3y^3)^4 = 3y^3 \times 3y^3 \times 3y^3 \times 3y^3 = 81y^{12}$

4) $\frac{56x^7y^2z^4}{7x^2y^6z^4} = 8x^5y^{-4}$ or $\frac{8x^5}{y^4}$

Exercise

1) $10x^7 \div 5x^5 = \frac{10x^7}{5x^5} = 2x^2$

2) $6y^4 \times 4y^2 = 24y^6$

3) $(2x^2)^4 = 16x^8$

4) $3p^2q^3 \times 2p^2q^2 = 6p^4q^5$

5) $\frac{5x^8 \times 4x^4}{2x^3} = \frac{20x^{12}}{2x^3} = 10x^9$

Exercise 10C P214 Blue Books

1a) $5^2 \times 5^2 = 5^4$

2a) $6^5 \div 6^2 = 6^3$

3a) $a^2 \times a = a^3$

4a) $(4^2)^3 = 4^6$

5a) $2a^2 \times 3a^3 = 6a^5$

6a) $6a^3 \div 2a^2 = 3a$

7a) $2a^2b^3 \times 4a^3b = 8a^5b^4$

8a) $\dfrac{6a^4b^3}{2a^5} = 3a^3b^2$
