

Chapter 6

Self-Exercise

1. Simplify the following expressions. Give your answers in index form.

(a) $3^7 \times 3^6$

(b) $2^7 \times 2$

(c) $4^5 \times 4^6$

(d) $3^7 \div 3^2$

(e) $9^0 \div 9^2$

(f) $3^0 \times 3^2 \times 3^4$

(g) $(3^2)^5$

(h) $(5^{-2})^2$

(i) $(10^5)^3$

(j) $3^{-3} \times (3^0 \times 3^3)$

(k) $8^{-2} \times \frac{1}{8} \times (8^0 \times 8^3)$

(l) $(2x)^2 \times x^3 \times 2^{-1}$

2. Simplify the following in index form.

(a)

$$(-2x^2y^{-4})^{-2}$$

(b)

$$\left(\frac{2x}{3y^2}\right)^3$$

(c)

$$(6x^3)^2$$

(d)

$$\left(\frac{-2a^3b^2c^0}{3a^2b^3c^7}\right)^{-2}$$