

Rule 1

$$a^m \times a^n = a^{m+n}$$

To multiply powers of a number, **add** the indices.

Example 1 :-

$$\begin{aligned} & x^2 \times x^3 \\ &= x \times x \times x \times x \times x \\ &= x^5 \end{aligned}$$

1. Use **Rule 1** above to

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

(b) $x^3 \times x^4 = x$

(c) $k^5 \times k^4 = k$

(d) $w^2 \times w^2 = w$

(e) $q^7 \times q^6 = q$

(f) $x^3 \times x^{-1} = x$

(g) $x^5 \times x^{-2} = x$

(h) $p^7 \times p^{-4} = p$

(i) $k^7 \times k^{-8} = k$

(j) $s^{-4} \times s^2 = s$

(k) $q^{-1} \times q^{-2} = q$

(l) $r^{-5} \times r^{-9} = r$

(m) $x^2 \times x^3 \times x^4 = x$

(n) $q^3 \times q^5 \times q^2 = q$

(o) $y^6 \times y^1 \times y^3 = y$

(p) $y^{-2} \times y^{-1} \times y^{-3} = y$

(q) $y^{-3} \times y^2 \times y^2 = y$