Exponent Laws

1. Identify the **base** in the following powers:

a) 5^3	b) $2x^4$	c) $(ab)^2$	d) $(-3)^5$

2. Complete the following exponent laws:

Product Rule	Quotient Rule	Zero Exp. Rule	Power to Power Rule
e) $x^a \cdot x^b =$	f) $\frac{x^a}{x^b} =$	g) $x^0 =$	h) $\left(x^a\right)^b =$

3. Simplify the following expression by applying the exponent laws & evaluate.

i) $x^3 \cdot x^4 = x$	j) $x^3y \cdot xy^5 = x \quad y$	k) $\left(b^3\right)^5 = b$	l) $\left(2b^3\right)^2 = \quad b$
m) $\frac{y^6}{y^4} = y$	n) $\left(2b^3\right)^0 =$	o) $\frac{\left(4b^5\right)^2}{\left(2b^2\right)^3} = \quad b$	p) $(2b)^{-2} = —$