

Year Ten Homework Sheet # 6, Term 3

Due Date:

When multiplying, add the indices	$a^m \times a^n = a^{m+n}$
When dividing, subtract the indices	$a^m \div a^n = a^{m-n}$
To find a power of a power, multiply the indices	$(a^m)^n = a^{m \times n}$
Anything to the zero power is equal to one	$(3a)^0 = 1$ but $3a^0 = 3 \times 1 = 3$
Negative powers can be made positive by inverting	$m^{-4} = \frac{1}{m^4}$

Name:

Write b^4 in expanded form	Write $s \times s \times s \times s \times s$ in index form
$2^4 \times 2^5$	$a^{14} \div a^2$
$a^6 \times a$	$\frac{12x^5}{3x^2}$
$-3b^6 \times 2b^3$	$20d^8 \div 4d^2$
$(c^3)^4$	$(3x^2)^0$
$(g^3)^4 \times (f^2)^6$	$6(g^2)^3 \div 2(g^5)^4$
$-2r^0$	$(3x^2y^4)^3$
$\frac{x^{-3}y^2}{2xy^{-3}} \div \frac{4x^2y^{-5}}{6xy^3}$	$\frac{20m^2n^6p^8}{2mn^2q^4}$
Write c^{-3} as a positive index	Write $4d^{-5}$ as a positive index
Write 234000 in scientific notation	Write 3.089×10^4 as a number
Write 6.1×10^{-3} as a number	In the term 10^4 which number is the index?