GCSE FOUNDATION · REVISION MAT 4

Laws of indices

1 Simplify

(a) $m^2 \times m^7$

(b) $m^7 \div m^4$

2 Simplify

(a) $(m^5)^2$

(b) $4m^4 \times 3m^2$

3 Ian says,

"$m^6 \times m^2 = m^{12}$"

Explain the mistake Ian has made.

4 Show that

$24m^9q \div 3m^4q = 8m^5$

5 A rectangle has area $36m^{10}$ cm^2. Its length is $9m^3$ cm.



Find an expression for the width.

6 Find the value of n.

$m^n \times m^2 = m^9 \div m^3$

Mr&Mrs MATHS

1 (a) m^9

(b) m^3

2 (a) m^{10}

(b) $12m^6$

3 When you multiply, you **add** the powers, not multiply them.

$m^6 \times m^2 = m^8$

ANSWERS · REVISION MAT 4

Laws of indices

4 $24 \div 3 = 8$

$m^9 \div m^4 = m^5$

$q \div q = 1$ ✓

5 $36m^{10} \div 9m^3$

$= 4m^7$

6 $m^9 \div m^3 = m^6$

$n + 2 = 6$

$n = 4$

Mr&Mrs MATHS