GCSE FOUNDATION · REVISION MAT 1

Laws of indices

1 Simplify

(a) $x^4 \times x^3$

(b) $x^9 \div x^2$

2 Simplify

(a) $(x^3)^2$

(b) $3x^2 \times 4x^5$

3 Fay says,

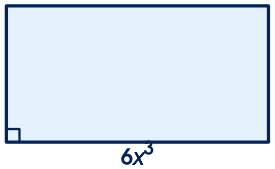
"$x^3 \times x^4 = x^{12}$"

Explain the mistake Fay has made.

4 Show that

$12x^6b \div 4x^2b = 3x^4$

5 A rectangle has area $24x^7$ cm^2. Its length is $6x^3$ cm.



Find an expression for the width.

6 Find the value of n.

$x^n \times x^3 = x^{10} \div x^2$

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Laws of indices

1 (a) x^7

(b) x^7

2 (a) x^6

(b) $12x^7$

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

$x^3 \times x^4 = x^7$

4 $12 \div 4 = 3$

$x^6 \div x^2 = x^4$

$b \div b = 1$ ✓

5 $24x^7 \div 6x^3$

$= 4x^4$

6 $x^{10} \div x^2 = x^8$

$n + 3 = 8$

$n = 5$

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