GCSE FOUNDATION · REVISION MAT 5

Laws of indices

1 Simplify

(a) $p^3 \times p^5$

(b) $p^{12} \div p^5$

2 Simplify

(a) $(p^3)^4$

(b) $5p^3 \times 2p^6$

3 Jas says,

"$p^5 \times p^3 = p^{15}$"

Explain the mistake Jas has made.

4 Show that

$15p^7r \div 3p^2r = 5p^5$

5 A rectangle has area $40p^8$ cm^2. Its length is $8p^5$ cm.



Find an expression for the width.

6 Find the value of n.

$p^n \times p^6 = p^{13} \div p^2$

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Laws of indices

1 (a) p^8

(b) p^7

2 (a) p^{12}

(b) $10p^9$

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

$p^5 \times p^3 = p^8$

4 $15 \div 3 = 5$

$p^7 \div p^2 = p^5$

$r \div r = 1$ ✓

5 $40p^8 \div 8p^5$

$= 5p^3$

6 $p^{13} \div p^2 = p^{11}$

$n + 6 = 11$

$n = 5$

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