GCSE FOUNDATION · REVISION MAT 3

Index notation

1 Write each as a single power.

(a) $3^5 \times 3^4$

(b) $6^{10} \div 6^4$

2 (a) Write $(5^4)^2$ as a single power of 5.

(b) Work out the value of 10^6

3 Lou says,

"$5^3 \times 5^6 = 25^9$"

Explain the mistake Lou has made.

4 Show that $2^3 \times 5^2 = 200$

5 Find the value of n.

$5^n \times 5^2 = 5^9 \div 5^1$

6 Which is bigger, 2^7 or 5^3?

Show how you decide.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Index notation

1 (a) 3^9

(b) 6^6

2 (a) 5^8

(b) 1,000,000

3 When multiplying powers of the same base, add the powers but keep the base the same.

$5^3 \times 5^6 = 5^9$

4 $8 \times 25 = 200$ ✓

5 Right side = 5^8

$n + 2 = 8$

$n = 6$

6 $2^7 = 128$

$5^3 = 125$

2^7 is bigger