GCSE HIGHER · REVISION MAT 5

Laws of indices

1 Write as a single power of 10.

$10^6 \div 10^2$

2 Work out the value of

$(-2)^4$ and -2^4

3 Show that

$9^{1/2} + 8^{1/3} = 5$

4 Find n.

$3^n = \frac{1}{27}$

5 Show that

$32^{3/5} = 8$

6 Write as a single power of 2.

$2^3 \times 4^5 \div 8^2$

7 Show that

$0.04^{-1/2} = 5$

8 $2^a = 3$

Find the value of 8^a and of 4^{a+1}.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Laws of indices

1 10^4

2 16 and –16

3 $3 + 2$

= 5

4 $\frac{1}{27} = 3^{-3}$

***n* = –3**

5 $(32^{1/5})^3 = 2^3$

= 8

6 $2^3 \times 2^{10} \div 2^6$

2^7

7 $0.04 = \frac{1}{25}$

$(25)^{1/2}$

= 5

8 $8^a = (2^a)^3 = 27$

$4^{a+1} = 4 \times (2^a)^2 = 36$

27 and 36

Mr&Mrs MATHS