

1 BIDMAS

- a) Work out $20 - 3 \times 2^2$
b) Ali works out $3 + 5 \times 4 - 2$ and gets 30. What has he done wrong? Work out the right answer.

a) $20 - 3 \times 4 = 20 - 12 = 8$
b) he added $3 + 5$ first
 $3 + 20 - 2 = 21$

2 BIDMAS: placing brackets

- a) Put one pair of brackets in to make this true.
 $7 + 3 \times 6 - 2 = 19$
b) Four friends share the cost of a £38 meal and a £10 taxi equally. Write this as one calculation. Work out each share.

a) $7 + 3 \times (6 - 2) = 19$
b) $(38 + 10) \div 4 = £12$

3 Index notation

- a) Complete the table.
b) Write 125 as a power of 5.

Multiplication	$6 \times 6 \times 6$	$2 \times 2 \times 2 \times 2 \times 2$	$10 \times 10 \times 10 \times 10$
Index form	6^3	2^5	10^4
Value	216	32	10 000

a) see the table
b) $5 \times 5 \times 5 = 125$, so 5^3

4 Using index notation

- a) Which is bigger, 4^3 or 3^4 ? Show how you know.
b) $5^n = 625$. Find n .

a) $4^3 = 64$, $3^4 = 81$, so 3^4
b) $5 \times 5 \times 5 \times 5 = 625$, $n = 4$

Algebra 2

revision mat answers

Foundation A

5 Index laws: multiplying

- a) The tiles show $7^4 \times 7^5$. Write it as a single power of 7.
b) Find the missing power. $5^3 \times 5^{\square} = 5^{10}$

$\begin{array}{|c|c|c|c|} \hline 7 & 7 & 7 & 7 \\ \hline \end{array} \times \begin{array}{|c|c|c|c|c|} \hline 7 & 7 & 7 & 7 & 7 \\ \hline \end{array}$
 $7^4 \qquad \qquad \qquad 7^5$

a) $4 + 5 = 9$, so 7^9
b) $3 + 7 = 10$, so 7

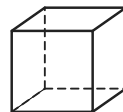
6 Index laws: dividing

- a) Write $8^9 \div 8^4$ as a single power of 8.
b) Write $\frac{2^7 \times 2^2}{2^5}$ as a single power of 2. Then work out its value.

a) $9 - 4 = 5$, so 8^5
b) $2^7 \div 2^5 = 2^2$
 $2^2 = 4$

7 Calculator: powers and roots

- a) Work out $2.4^3 - \sqrt{5.29}$
b) This cube has a volume of 3375 cm^3 . Find the length of one edge. Then find the area of one face.



Volume = 3375 cm^3

a) $13.824 - 2.3 = 11.524$
b) $\sqrt[3]{3375} = 15 \text{ cm}$, $15^2 = 225 \text{ cm}^2$

8 Calculator: brackets

- Leo wants to work out $\frac{18.4 + 6.2}{4.7 - 1.7}$.
He types $18.4 + 6.2 \div 4.7 - 1.7 =$ and gets this.
a) What answer should he get?
b) Write the keys he should press.

18.01914894

a) $24.6 \div 3 = 8.2$
b) $(18.4 + 6.2) \div (4.7 - 1.7) =$