

## Level 3 Maths Revision - Whole Numbers

### A: Rounding

Reminders

a) Round 25 678 to the nearest thousand

25 678 – the digit after the thousands is a 6 so round up to 25 700

b) Round 3 528 to the nearest hundred

3 528 – the digit after the hundreds is a 2 so round down to 3 500

3) Round 4 675 to the nearest ten

4 675 – the digit after the tens is a 5 so round up to 4 680

4) Round 467 to the nearest thousand

467 – the digit after the thousands is 4 so round down to 0

(This is less than 500 (half a thousand) so it rounds to 0)

Remember: -

If the next digit is 5 or more round up

If the next digit is less than 5 round down

Now try these examples:-

1) Round 108 576 to the nearest thousand

2) Round 56 123 to the nearest thousand

3) Round 7 987 to the nearest thousand

4) Round 789 to the nearest thousand

5) Round 123 to the nearest thousand

6) Round 5 099 to the nearest hundred

7) Round 5 487 to the nearest hundred

8) Round 16 411 to the nearest hundred

9) Round 67 to the nearest hundred

10) Round 45 to the nearest hundred

11) Round 6 789 to the nearest ten

12) Round 56 111 to the nearest ten

- 13) Round 5 555 to the nearest ten  
 14) Round 99 to the nearest ten  
 15) Round 9 999 to the nearest ten.

## B: Powers or indices

Reminder

$$8^4 = 8 \times 8 \times 8 \times 8 = 4\,096$$

Working

$$\begin{array}{r} 8 \times 8 = 64 \\ \times 8 \\ \hline 512 \end{array} \quad \begin{array}{r} 64 \\ \times 8 \\ \hline 512 \end{array} \quad \begin{array}{r} 512 \\ \times 8 \\ \hline 4096 \end{array}$$

Now try these examples **WITHOUT A CALCULATOR**:-

- 16)  $7^3$                       17)  $6^4$                       18)  $9^3$                       19)  $4^5$   
 20)  $2^5$                       21)  $10^3$                       22)  $1^{10}$                       23)  $0^9$

- 21) David claims that  $4^3$  is the same as  $3^4$ . Is he right? Show working to justify your answer.  
 22) If  $7^7 = 823\,543$ , calculate  $7^8$ . (Only one calculation necessary!)  
 23) If  $9^6 = 531\,441$ , work out  $9^5$ . (Only one calculation necessary!)

## C: Order of Operations

Reminder

Brackets first, then indices (sometimes called powers), then multiplication and division, then addition and subtraction.

Example

$7 \times 8 + (3 + 4)^2$  Do the bit in brackets first

$7 \times 8 + 7^2$  Now deal with the "squared"

$7 \times 8 + 49$  Multiplication before addition

$56 + 49 = 105$  Finally add

Now try these examples:-

- 24)  $2 \times 3 + 4 \times 5$                       25)  $2 + 3 \times 4 + 5$                       26)  $2 \times (3 + 4) \times 5$   
 27)  $(2 + 3) \times (4 + 5)$                       28)  $(2 + 3 + 4) \times 5$                       29)  $2 + 3 + 4 \times 5$   
 30)  $(2 + 3 + 4)^2$                       31)  $(2 + 3)^2 + 4$                       32)  $2^2 + 3^2 + 4^2$