

Check out

You should now be able to ...

✓ Multiply and divide numbers by powers of 10.	6
✓ Use index notation for integer powers.	6
✓ Round numbers to decimal places and significant figures.	6
✓ Use prime factors to find the HCF and LCM of pairs of numbers.	7
✓ Use rounding to make estimates.	7

Test it

Questions

1	6
2 - 3	6
4 - 5	6
6 - 7	7
8 - 9	7

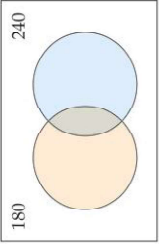


Language

Meaning

Index/indices	The index tells you how many times a number is multiplied by itself.	Example $5^3 = 5 \times 5 \times 5$
Significant figures (sf)	The first non-zero figures in a number.	The first two significant figures in 456.7 are 4 (400) and 5 (50).
Rounding	You can round numbers to a given number of sf.	456.7 rounded to 2 sf is 460
Estimate	Use rounding to approximate an answer.	$\frac{3.4 + 2.1}{1.9} \approx \frac{3 + 2}{2} = \frac{5}{2} = 2.5$
Factor	A number which divides exactly into another number.	1, 3, 9 and 27 are all factors of 27. $27 = 1 \times 27 = 3 \times 9$
Multiple	A multiple of a number appears in its times table.	6, 12, 18, 24... are all multiples of 6. $6 = 1 \times 6, 12 = 2 \times 6,$ $18 = 3 \times 6, 24 = 4 \times 6$
Prime	A prime number has only two factors, the number itself and 1.	2, 3, 5, 7, 11, 13, 17... are all primes 1 is not a prime number
HCF (Highest common factor)	The highest number that is a factor of two or more numbers.	The HCF of 24 and 40 is 8.
LCM (Lowest common multiple)	The lowest number that is a multiple of two or more numbers.	The LCM of 24 and 40 is 120.

- Calculate
 - 0.76×0.1
 - $45.1 \div 0.01$
 - 15.2×100
 - 0.92×1000
 - 216.8×0.01
 - $0.36 \div 0.1$
- Each of these numbers have been written in standard form. Work out the size of each number.
 - 7.2×10^3
 - 8.29×10^6
 - 4.1×10^{-2}
 - 30.8×10^{-5}
- Simplify leaving your answer as a single power of the number.
 - $10^4 \times 10^3$
 - $10^2 \times 10^5$
 - $10^7 \times 10^9$
 - $10^5 \div 10^4$
 - $10^6 \div 10^3$
 - $10^{10} \div 10^6$
- Round 271.0985 to the nearest
 - 100
 - 10
 - whole number
 - 1 dp
 - 2 dp
 - 3 dp
- Round each of these numbers to 1sf.
 - 462
 - 25945
 - 6.28
 - 0.29
 - 0.094
 - 0.98
- Write these numbers as products of their prime factors.
 - 2376
 - 546
 - 680
- Complete the Venn diagram to show the prime factors of 180 and of 240.



 - Use your Venn diagram to find the HCF of 180 and 240.
 - Use your Venn diagram to find the LCM of 180 and 240.
- Estimate the answer to each calculation without using a calculator.
 - 39×21
 - $18.9 \div 5.1$
 - $8870 \div 295$
 - $413 \times (153 + 641)$
 - $(0.473 + 0.509) \times 0.92$
 - $\frac{0.708 \times 451}{4.71}$
- One bottle of water costs £0.84. One bottle of cola costs £1.48.
 - Estimate the cost of 19 bottles of water.
 - Rita wants to buy 36 bottles of cola. She has £60 to spend. Use an estimate to decide if Rita can buy the cola.

What next?

0 - 4	Your knowledge of this topic is still developing. To improve look at Formative test: 3B-1; MyMaths: 1001, 1005, 1013, 1032, 1034, 1043 and 1044
5 - 7	You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 112, 114, 135, 171, 172, 173 and 182
8 - 9	You have mastered this topic. Well done, you are ready to progress!