

Key Language


1	Prime	A number that has exactly two factors; itself and 1.
2	Prime Factor	A number that is prime and divides a given number exactly.
3	Product	Multiplication.
4	Product of primes	Prime numbers that are being multiplied together.
5	Highest Common Factor (HCF)	The largest number that exactly divides two (or more) given numbers.
6	Lowest Common Multiple (LCM)	The smallest number that is a multiple of two (or more) given numbers.
7	Term	A small part of an expression. e.g. in $6x + 7xy - 3$, the terms are $6x$, $7xy$ and -3
8	Coefficient	Number part of a term. e.g. in $5x + 3$, the coefficient of x is 5.
9	Substitution	Replacing letters with values.
10	Index (plural: indices)	Another word for power.
11	Reciprocal	1 divided by the given number. (or one 'over' the number)

Reciprocals

The *reciprocal* of a number is 1 divided by the number.
(This has the effect of turning a fraction upside-down.)

e.g.

- The reciprocal of 5 is $\frac{1}{5}$
- The reciprocal of $\frac{3}{5}$ is $\frac{5}{3}$



Know

Negative numbers

On a calculator, use the (-) or (+/-) button.

Make sure you know these:

+ - becomes - e.g. $5 + -2 = 5 - 2 = 3$

- - becomes + e.g. $5 - -2 = 5 + 2 = 7$



You also need to know what happens when multiplying or dividing:

one negative >> the answer is negative e.g. $5 \times -3 = -15$, $-12 \div 3 = -4$

both negative >> the answer is positive e.g. $-5 \times -3 = 15$, $-12 \div -3 = 4$



Prime numbers

A *prime number* has exactly two factors (1 and itself).

You should know the first ten prime numbers:

2, 3, 5, 7, 11, 13, 17, 19, 23, 29

Revision

Make sure you know the fractions, decimals and percentages for these basic fractions.

Fraction	Decimal	Percentage
$\frac{1}{2}$	0.5	50%
$\frac{1}{4}$	0.25	25%
$\frac{1}{3}$	0.333333..... 0. $\dot{3}$	33. $\dot{3}$ %
$\frac{3}{4}$	0.75	75%
$\frac{1}{5}$	0.2	20%
$\frac{1}{10}$	0.1	10%

Notes

ORDER OF OPERATIONS

G

GROUPING SYMBOLS

() {} []

E

EXPONENTS

3^2 x^2 10^5

M

MULTIPLICATION **OR** DIVISION

GO FROM LEFT TO RIGHT

S

SUBTRACTION **OR** ADDITION

GO FROM LEFT TO RIGHT

Know

PRACTICE QUESTIONS

Ten of these questions will be chosen, with very little change, to make the Knowledge Test. If you can confidently answer all of these, you will pass easily.

Use pages 1 and 2 to research and *learn* anything that you don't know yet.

1. What does the word *product* mean?
2. How many factors does a *prime number* have?
3. What is $-12 \div -4$?
4. What is $-20 \div 5$?
5. What is $10 + -3$?
6. What is $6 - -4$?
7. Look at this expression: $5x + 4y + 9$
Write down one of its *terms*.
8. Look at this expression: $5p^2 + 6p - 2$
What is the coefficient of p^2 ?
9. What word means
'1 divided by a number' ?
10. What is the *reciprocal* of 7 ?
11. What is the *reciprocal* of $\frac{4}{5}$?
12. What is $\frac{3}{4}$ as a percentage?
13. What is the decimal equivalent of 25% ?
14. What simplified fraction is equivalent to the decimal $0.\dot{3}$?

NOTE: Questions like Q12-14 could involve any of the values in the table on page 2



ANSWERS

1. Multiply
2. Two
3. 3
4. -4
5. 7
6. 10
7. $5x$ or $4y$ or 9 (any of these)
8. 5
9. Reciprocal
10. $\frac{1}{7}$
11. $\frac{5}{4}$
12. 75%
13. 0.25
14. $\frac{1}{3}$