

How to pass Entry Level 3 Numeracy in a nutshell.
A free resource from www.grahamwroe.org.uk

The test is in 3 sections, Number, Measures Shape and Space and Data Handling. There is no time limit, so don't rush. Take your time and check you working carefully.

To pass you need to score 80% or more on each paper- that means you mustn't make more than 5 mistakes!

The test can be done in an ordinary lesson, but you will need to sit away from your friends and not talk to anybody while you are doing it.

These are some of the most common mistakes in Entry 3 tests.

Number

Not reading the question properly! The student will do a calculation and get an answer, but because s/he misread the question he gets it wrong!

Knowing the difference between odd and even numbers.

Even numbers are 2, 4, 6, 8, 10, 12.....

Odd numbers are 1, 3, 5, 7, 9, 11.....

Subtraction

Making a mistake in a subtraction sum.

Lots of students take the smaller digit from the bigger digit, which ever way round it is supposed to be!

For example they do

$$\begin{array}{r} 41- \\ \underline{28} \\ \underline{27} \end{array} \quad \mathbf{X}$$

Instead of

$$\begin{array}{r} 41- \\ \underline{28} \\ \underline{13} \end{array} \quad \checkmark$$

Be very careful with 3 digit subtraction
Don't do this!

$$\begin{array}{r} 246- \\ \underline{188} \\ \underline{142} \end{array} \quad \mathbf{X}$$

Do this

$$\begin{array}{r} 246- \\ \underline{188} \\ \underline{58} \end{array} \quad \checkmark$$

When you have got the answer always check by adding the answer to the number you took away. You should get the number you started with.

So in the example above the student that made a mistake would realise he'd done it wrong because

$$\begin{array}{r} 188+ \\ \underline{142} \\ 330 \end{array}$$

The student that was correct would do

$$\begin{array}{r} 188+ \\ \underline{58} \\ 246 \end{array}$$

which is the number we started with!

There are lots of different words that all mean subtract.
Reduce, find the difference, take away

Multiplication

You need to learn your multiplication tables!

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Remember, it doesn't matter which order you do a multiplication sum, so really you only need to learn half of these!

7×8 is the same as 8×7

9×3 is the same as 3×9

Division

The most common mistake with division is getting the numbers the wrong way round.

For example suppose you had to work out how many 5 seater taxis are needed to transport a group of 19 friends home after a night out. Is the sum

$19 \div 5$ or $5 \div 19$?

The first sum is correct. The second means divide 5 into 19 equal pieces!

If you do the calculation $19 \div 5$ you get 3 remainder 4.
($3 \times 5 = 15$, $15 + 4 = 19$) Lots of students think that this means we need 3 taxis. That would leave 4 people stuck on the kerb unable to get home! So the correct answer is that we need 4 taxis.

Rounding

To round a number to the nearest 100, look at the 10's digit. If it is 5 or more, round up. If it is less than 5, round down.

eg 349 is 300 to the nearest 100, because 4 is less than 5

693 is 700 to the nearest hundred, because 9 is more than 5

259 is 300 to the nearest hundred because the tens digit is 5.

To round to the nearest 1000, check the hundreds digit. Again if it is 5 or more, round up. If it is less than 5 round down.

eg 4398 is 4000 to the nearest 1000, because the hundreds digit is 3

5590 is 6000 to the nearest 1000, because the hundreds digit is 5.

Rounding is often used to **estimate** the answer to a difficult sum.

Eg 29×8 is about $30 \times 10 = 300$

Decimals

A common mistake with decimals is forgetting to put the zero and point at the beginning of a number when this is sometimes important.

For instance you need to work out the cost in pounds of 12 bottles of juice that cost 95p each on a calculator.

Which sum is correct?

$$12 \times 95 \quad \text{or} \quad 12 \times 0.95$$

The first would give a very big answer! The second is correct. A good way to check this is to say that the juice costs nearly £1, so the total will be about £12.

Fractions

Remember how to find equivalent fractions.

All these fractions are the same as one half.

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10}$$

Note the top number is always half of the bottom number.

These fractions are all the same as one third.

$$\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12} = \frac{5}{15}$$

Here the top number is one third of the bottom number

Measures Shape and Space

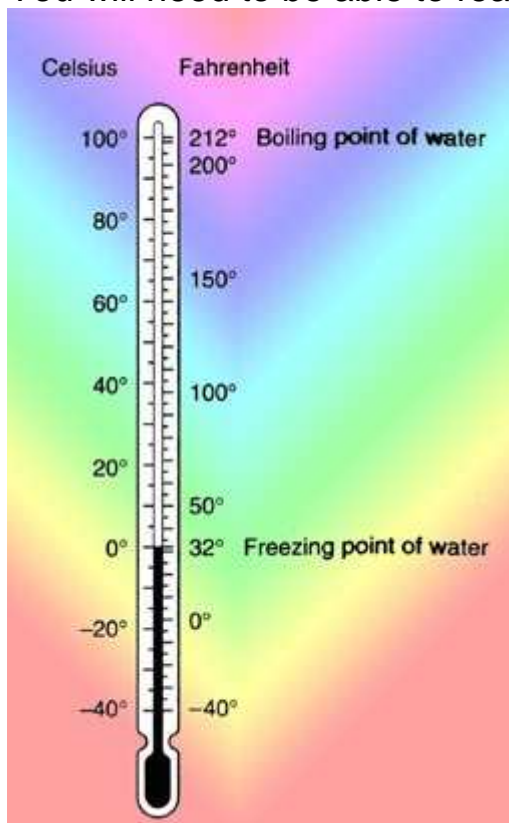
Rounding is often important in this section too as you need to round money to do an approximation. So £2.78 would round to £3 to the nearest pound, or £2.80 to the nearest 10p.

Lots of students don't know what units we use in Britain for road signs. We still use miles. In mainland Europe they use kilometres.



This sign means the speed limit is 30 miles per hour.

You will need to be able to read scales.



On the Celsius scale there are 4 marks between 0 and 20. This means each mark must be $20 \div 4 = 5$ degrees.

On the Fahrenheit scale there are 10 marks between 0 and 50. $50 \div 10 = 5$, so each mark represents 5 degrees.

Learn these facts

Weight

1000g = 1kg

1000kg = 1 tonne

Capacity

1000ml = 1 litre

Length

1000mm = 1 m

100 cm = 1m

1000m = 1km

Time

Am means before 12 noon

Pm means after 12 noon

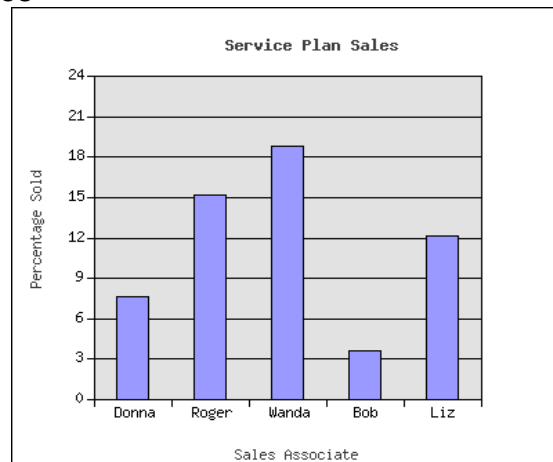
60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day

Data Handling

This is a bar chart. A bar chart should always have a title and labels on the vertical (up) and horizontal (across) axes



Pictograms represent data with pictures.

Pictogram to show the population of some cities

Lots of students make mistakes with pictograms because they don't read the key.

If the question said "What is the population of Berlin?" the answer is not 3!

The answer is 3 million because the key shows that each picture of a person represents 1 million people.

	1 person icon = 1 million
London:	5 person icons
Paris:	3 person icons
Berlin:	3 person icons
Rome:	2 person icons
Moscow:	7 person icons