

Level 2 Numeracy test – vocabulary and revision notes

Number

Negative numbers e.g. -2, -8, -3.5 (say minus two, minus eight, minus three point five)

Put numbers **in order** from biggest to smallest eg 6, -1, 9, 10, -8, -10

Answer: 10, 9, 6, -1, -8, -10

Multiple – A multiple of a number can be divided exactly by that number
e.g. 18 is a multiple of 2, 3, 6 and 9

Factor – A factor of a number is something that divides exactly into it
e.g. 2, 3, 4 and 6 are all factors of 12

Prime Number – A prime number has only two factors – itself and one
e.g. 2, 5, 7 and 11 are all prime numbers

Estimate – buy 4 CDs at £7.98 each. How much approximately? $£8 \times 4 = £32$

Ratio – e.g. Dilute 1 part orange juice to 4 parts water. (Dilute – add water) Written as a ratio is 1 : 4

Proportion – increase or decrease a quantity in proportion
e.g. to **double** the amount, multiply everything by 2
to make **five times** as much, multiply everything by 5
to make **half** the amount, divide everything by 2
to make a **third** of the amount, divide everything by 3

Using formulae (formula – singular; formulae – plural)

$2a = 2 \times a$; $a \times b = a \times b$; $2ab = 2 \times a \times b$; $2(a + b) = 2 \times (a + b)$

Perimeter = distance around the edge of a 2-D shape

Perimeter = $2(l + w)$ l = length, w = width

Perimeter is measured in cm, metres, km, mm etc

Area = is the amount of surface covered by a 2-D shape (flat shape)

Area = lw

Area is measured in square units: m^2 , cm^2 , mm^2 , km^2

Volume = is the space taken up by a 3-D shape (a solid) or liquid

Volume = lwh h = height

Volume is measured in cubic units: m^3 , cm^3 , mm^3 , km^3

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Fractions - $\frac{2}{4}$ and $\frac{1}{2}$ are equivalent fractions (equal)

In the fraction $\frac{2}{3}$, 2 is the numerator and 3 is the denominator

Reduce a fraction to its simplest form - $\frac{24}{30} = \frac{12}{15} = \frac{4}{5}$

Decimals

6.5 is a decimal number - say six point five

• = decimal point

Round 6.247 to 1 decimal place = 6.2

Round 6.268 to 1 dp = 6.3

Round 6.268 to 2 dp = 6.27

Round 47 to the nearest ten = 50

Round 438 to the nearest 100 = 400

VAT = Value Added Tax = 17.5%

Measures, Shape and Space

Convert between currencies - buying rate / selling rate.

E.g. If $\text{£}1 = \text{€}1.3$ How many Euros can you buy for $\text{£}10$?

$10 \times 1.3 = \text{€}13$

Convert between different measures (conversions will be given)

12 inches in a foot; 3 feet in a yard;

1760 yards in a mile

16 ounces in a pound (lb); 14 pounds in a stone

20 fluid ounces in a pint; 8 pints in a gallon

1 litre = 1.76 pints

1 metre = 39.37 inches

1 kilogram = 2.205 pounds

1 inch = 2.54 cm

1 ounce = 28.35 grams

A foot is about 30 cm

1 lb is about 450 grams

A gallon is about $4\frac{1}{2}$ litres

A litre is a bit less than 2 pints

A metre is a bit more than a yard

A kilogram is a bit more than 2 lb

An inch is about $2\frac{1}{2}$ cm

An ounce is about 30 grams

Temperature - measured in Celsius and Fahrenheit scales

Circles

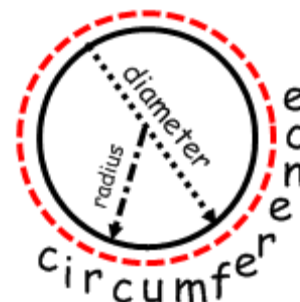
Circumference - distance around the edge of a circle

Diameter - distance across a circle

Radius - half the distance across a circle

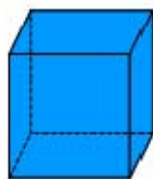
π

Pi = 3.142 or $\frac{22}{7}$ (said 'twenty two over seven')



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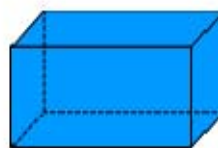
3D Shapes (solid shapes)



cube



cone



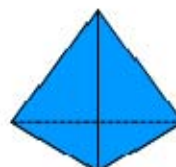
cuboid



rhombus



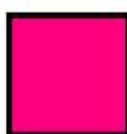
rectangle



triangular
based pyramid



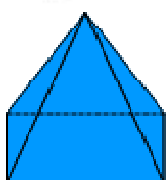
cylinder



square



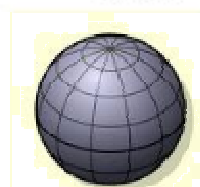
circle



square based
pyramid



triangle



sphere

Find volume of different shapes (formulae will be given)



Parallel lines - two lines that are the same distance apart at all times e.g. railway tracks.

Scale drawing - on a room plan, for example, 1cm = 2m so expressed as a ratio: 1:200.
Example: If the scale is 1:100 on a plan, what would one centimetre represent? (100 cm, which is 1 metre) What would 10cm represent? (1000 cm, which is 10 metres)

Data handling

Median

To find the median put the numbers in order and find the middle number.

Example: Find the median for 2, 5, 8, 2, 7, 5, 1.

First put them in order: 1, 2, 2, 5, 5, 7, 8. Median = 5

Mode

The mode is the most common number. (You can have more than one mode)

Example 1: Find the mode for 2, 5, 5, 8, 7, 4, 4, 7, 2, 7. Mode = 7

Example 2: Find the mode for 2, 5, 5, 8, 7, 5, 4, 7, 2, 7. Mode = 7 and 5