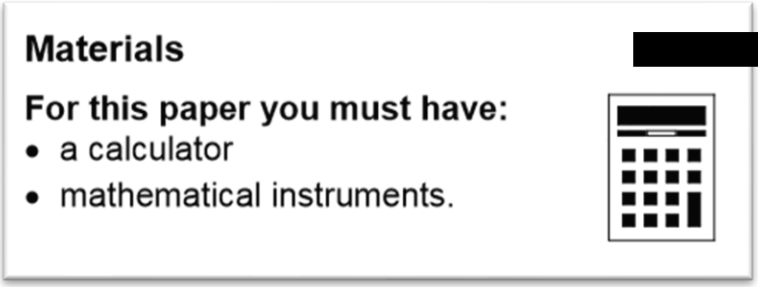
GCSE MATHS AQA – REVISION GUIDE

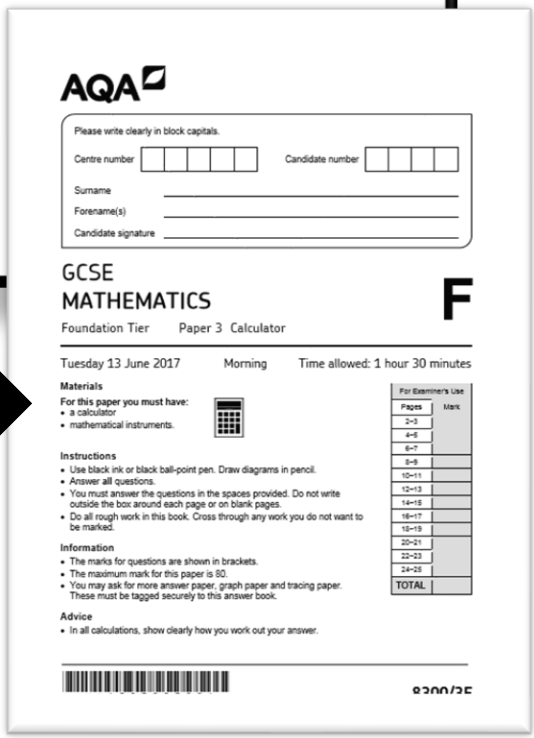
AQA GCSE MATHS - EXAM DATES

16th May 2024 - Non Calculator

3rd June 2024 – Calculator 1

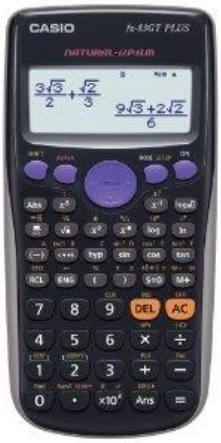
10th June 2024 – Calculator 2





REMEMBER YOUR CALCULATOR!!!!

Casio FX-83GTPLUS Scientific Calculator

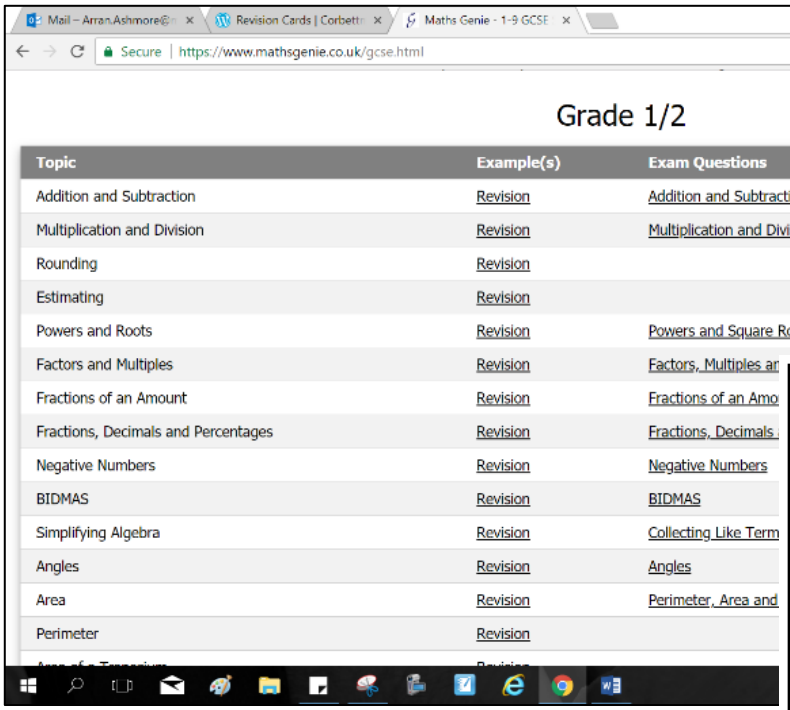


EQUIPMENT CHECK-LIST:

- ***BLACK PEN*** ☐
- ***PENCIL*** ☐
- ***CALCULATOR*** ☐
- ***GEOMETRY SET*** ☐

USEFUL WEBSITES AND RESOURCES

***** www.mathsgenie.co.uk – GCSE Grades 1-5 (foundation) *****



OTHER WEBSITES

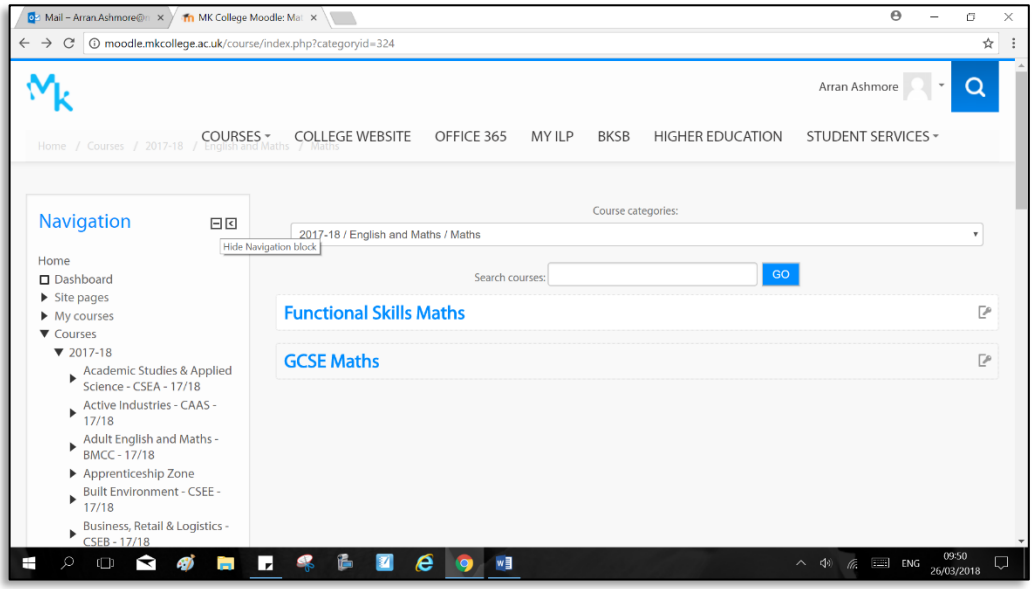
www.corbettmaths.com

www.mathsisfun.com

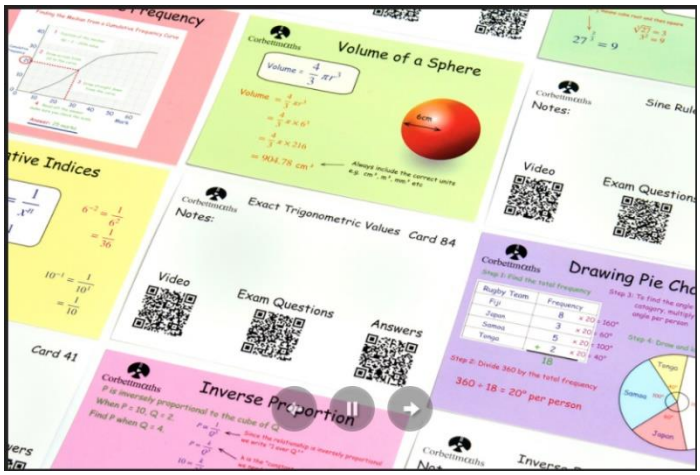
www.mrbartonmaths.com

CHECK HERE ALSO (**GCSE maths**):

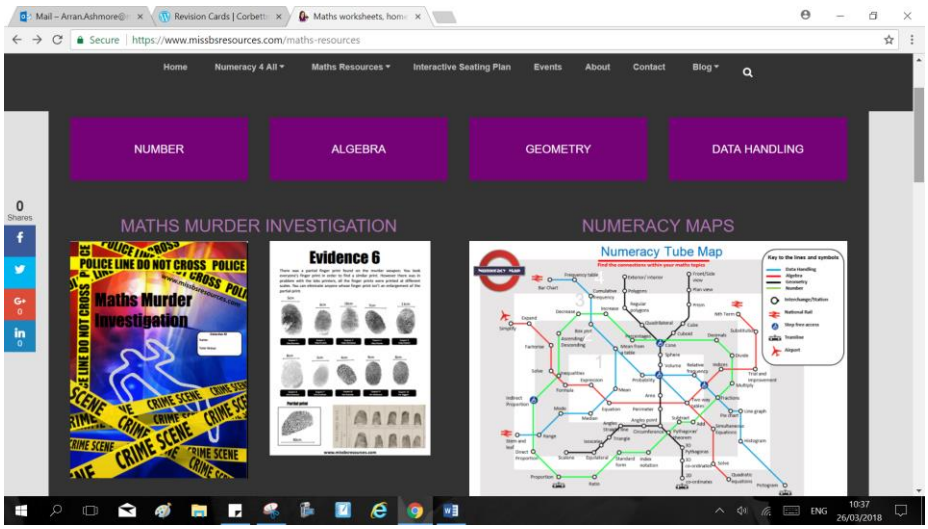
http://moodle.mkcollege.ac.uk/course/index.php?categoryid=324



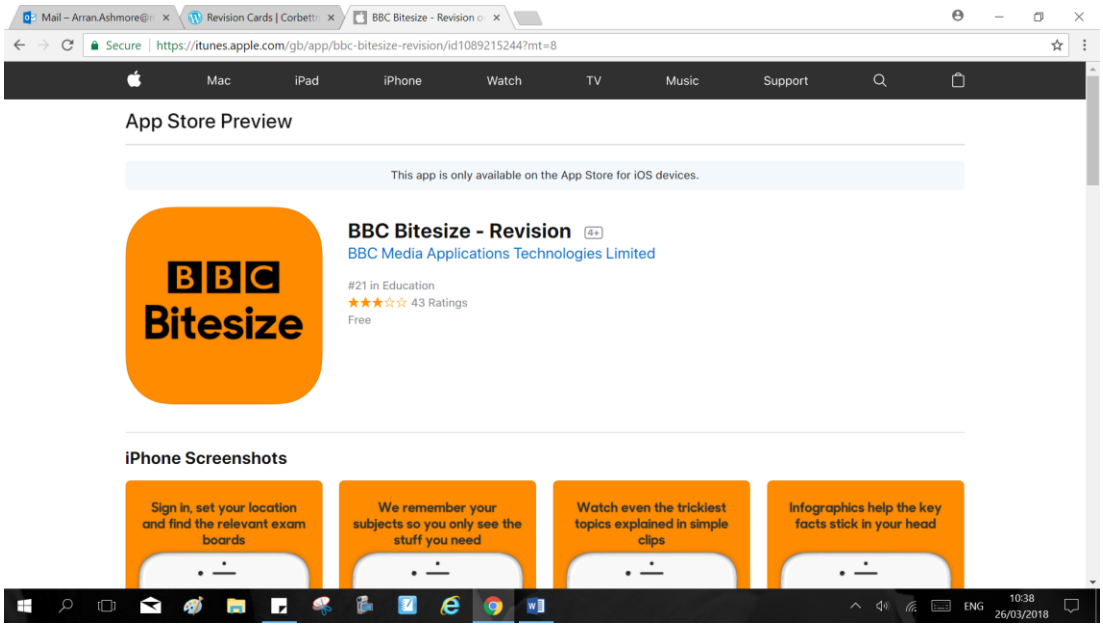
www.corbettmaths.com/revision-cards/



www.missbsresources.com/maths-resources



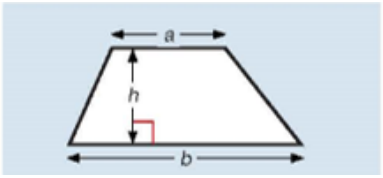
BBC Bitesize app (Android and Iphone):



Info you will be given

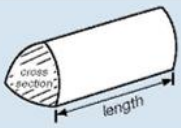
Area

Trapezium $= \frac{1}{2}(a + b)h$



Volume

Prism = area of cross section × length



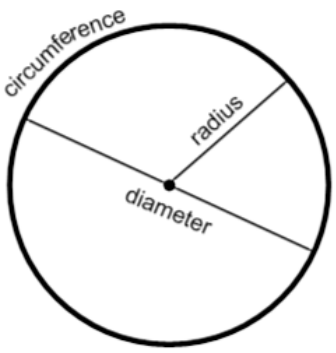
Cylinder $= \pi r^2 h$

Circles

Circumference = $\pi \times$ diameter, $C = \pi d$

Circumference = $2 \times \pi \times$ radius, $C = 2\pi r$

Area of a circle = π x radius squared $A = \pi r^2$

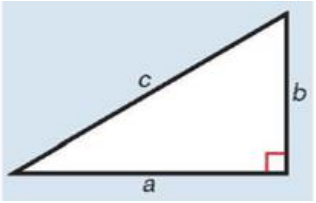


Pythagoras

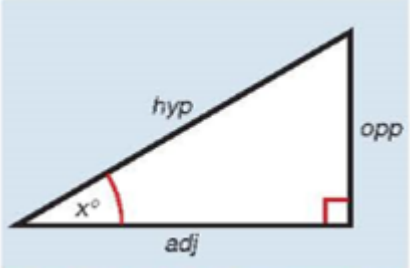
Pythagoras' Theorem

For a right-angled triangle,

$a^2 + b^2 = c^2$



Trigonometry

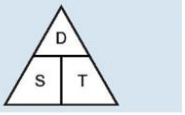


$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$, $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$, $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$

Compound measures

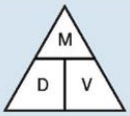
Speed

$\text{speed} = \frac{\text{distance}}{\text{time}}$



Density

$\text{density} = \frac{\text{mass}}{\text{volume}}$




EXAM TIPS

1) **Make sure you understand the key word in the question:**

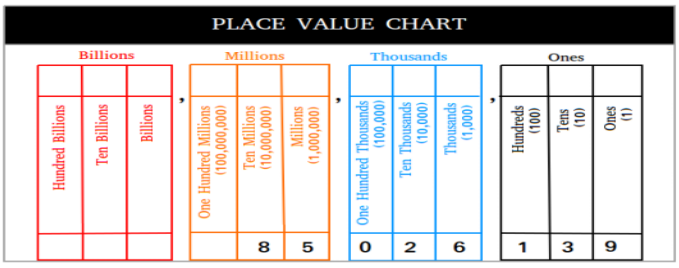
- ***Write down/state*** – No explanation needed
- ***Calculate/find/solve/show*** – Show your working (step by step!)
- ***Draw*** – Plot accurately on graph provided and draw (using a ruler and pencil)
- ***[3 marks]*** – This is an indication of how many steps **you will be required** to show to answer the question

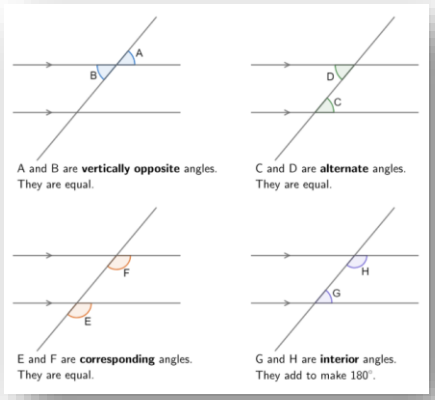
2) **Show your working and check your answers:**

- ***Units*** – Ensure you include the units in your final answers
- ***Round at the end!*** – DO NOT round numbers during a calculation as this will mean the final answer is incorrect.
- ***Logical order*** – Put your workings in a logical step by step sequence.
- ***CHECK/CHECK/CHECK*** – Check you have put enough maths per marks and that you have answered the question (YES or NO etc).

3) **What are the examiners looking for?**

- Work that is clearly set out, easy to follow and with a clear underlined answer.
- Neat drawings and graphs that have been well presented and the correct equipment used.
- Logical working out that clearly leads to the right answer.
- **THE RIGHT ANSWER** – obviously (make it obvious even if you are unsure)



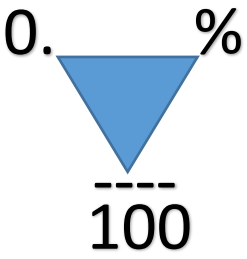


smaller < **bigger** **7=7** **8 ≤ 8,9,10,11…..**

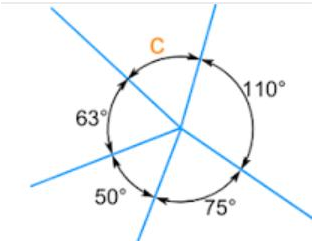
-neg 0 +pos

Signs the same Pos+  Signs different – Neg 

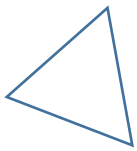
Bounds +0.5 and -0.5 eg. upper bound of 13 is 13.5, lower bound is 12.5

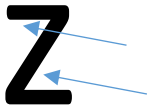


fraction to decimal to percent eg. 0.42 42% 42/100

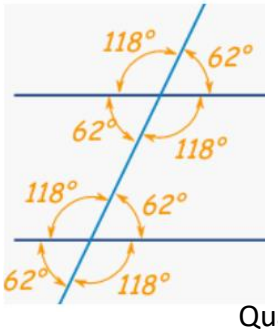


Angles at a point add to 360

Triangles add to 180 



z angles are the same inside



Quadrilaterals add to 360

BODMAS BIDMAS 3x2+4/6-1

Algebra balance X + 3 = 7 becomes X = 7 - 3

the S A M E to both sides !

-2 times table starting at 5

5 is different from -2 by 7

So…. 7 – 2n is the sequence

The terms in this sequence

5, 3, 1, −1, −3, −5, −7, −9 …

−2 −2 −2 −2 −2 −2 −2

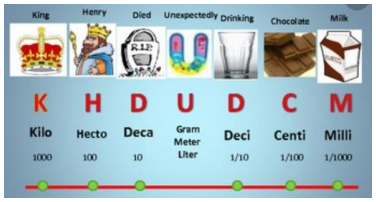
can be found by subtracting 2 each time.

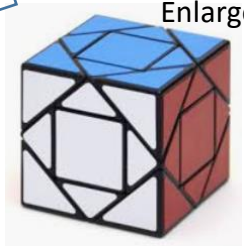
Y=kx

Enlargement Side x k (..perimeter)

x k^2 (..area)

x k^3 (..volume)





Kilo Hecto Deka Unit Deci Centi Milli eg 310 cm = 3.1 m

king henry drinks ukky dark chocolate milk ! METRIC CONVERSIONS !

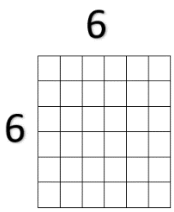
RATIO

1kg =	2.2lbs
5 x 1kg =	5 x 2.2 lbs

ozs pounds stone tons

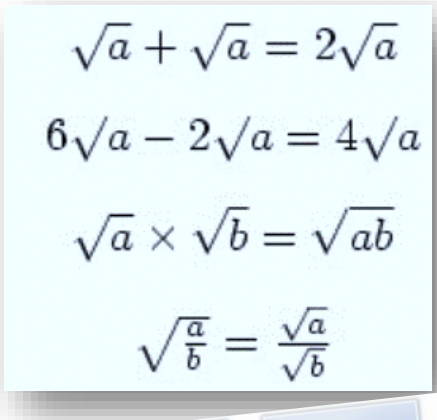
fl ozs pints

IMPERIAL CONVERSIONS in feet yards miles



6x6 = 36 so square root of 36 is 6 √36 = 6

length of the line ⟷ area of the shape

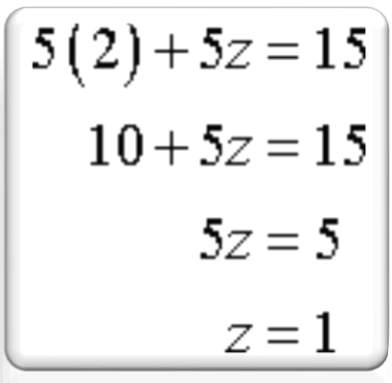


$$\sqrt{a}+\sqrt{a}=2\sqrt{a}$$

$$6\sqrt{a}-2\sqrt{a}=4\sqrt{a}$$

$$\sqrt{a}\times\sqrt{b}=\sqrt{ab}$$

$$\sqrt{\frac{a}{b}}=\frac{\sqrt{a}}{\sqrt{b}}$$

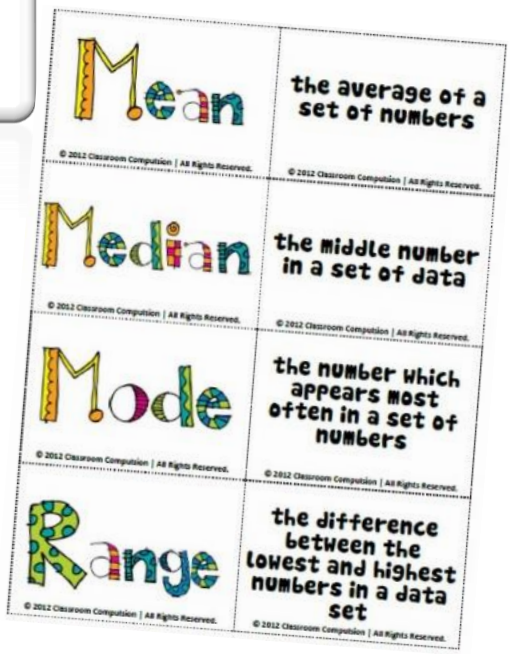


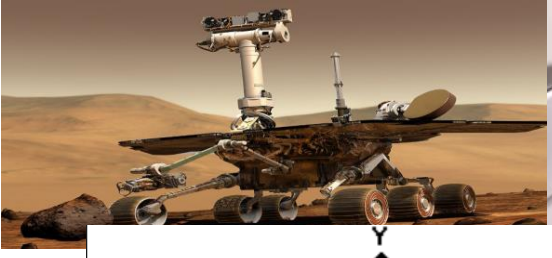
$$5(2)+5z=15$$

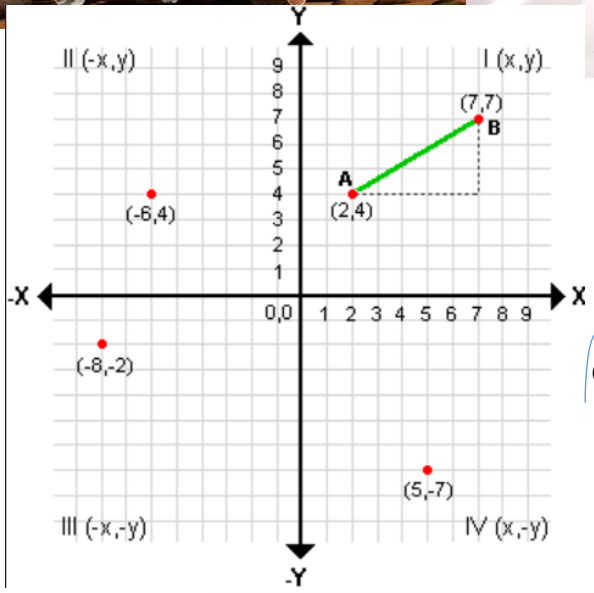
$$10+5z=15$$

$$5z=5$$

$$z=1$$







Coordinates (x , y) x first, then y

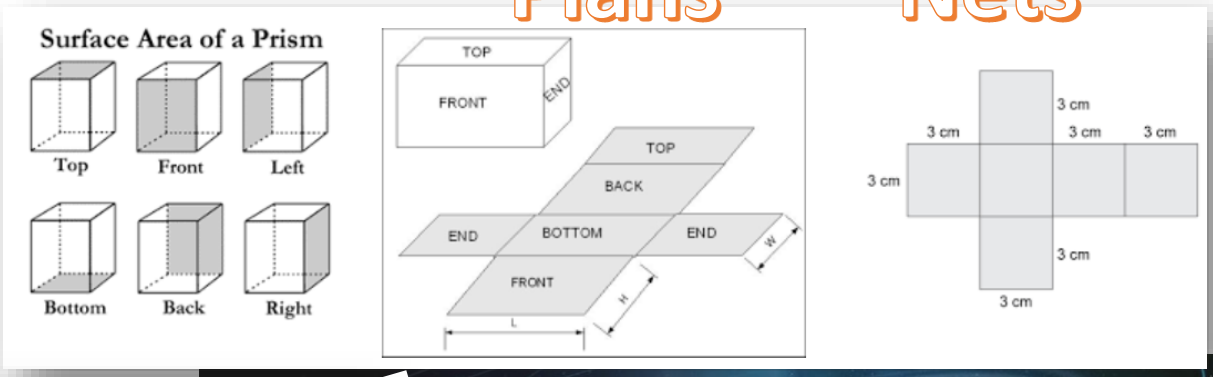
y = m x + c

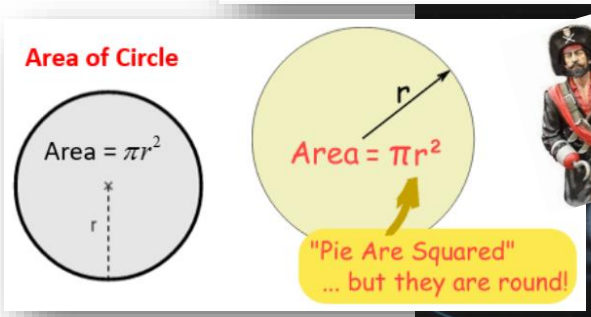
Gradient is change in height (y) /change in run (x)

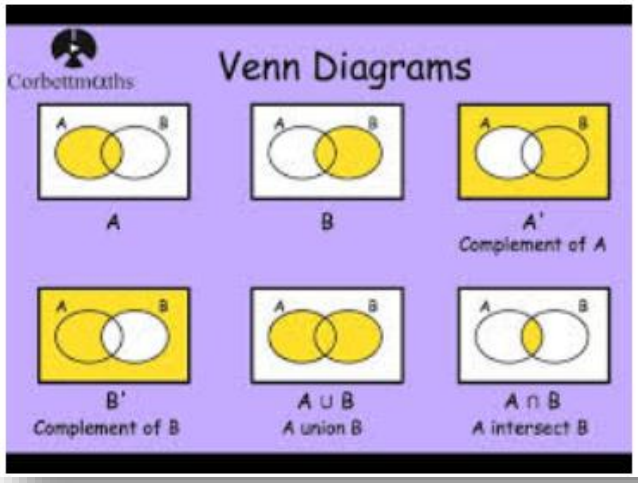
+c is where the line crosses the y axis

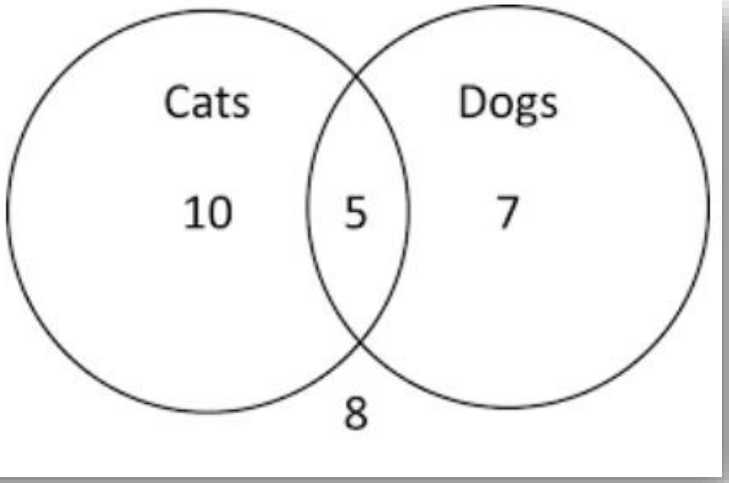
Plans

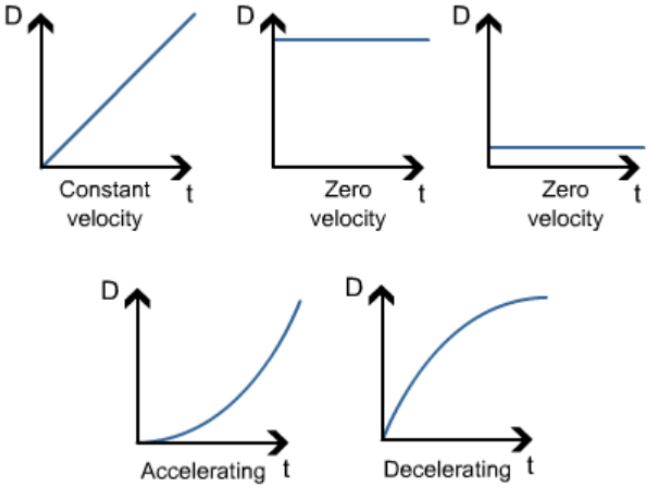
Nets

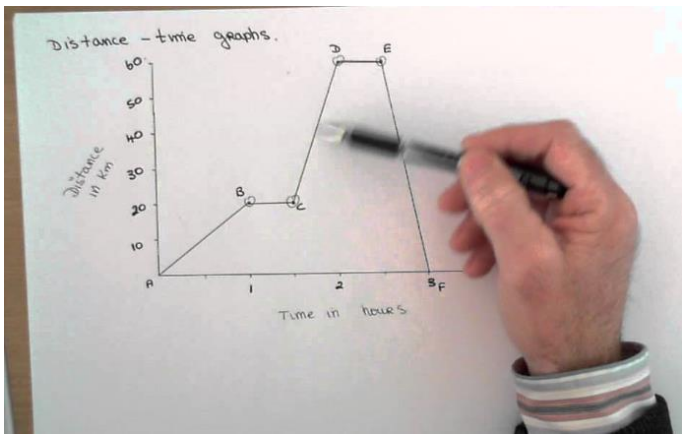










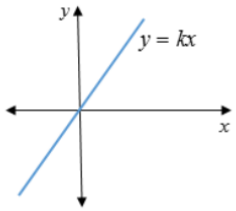


Split the graph into sections, describe each…

Directly Proportional

$y \propto x$

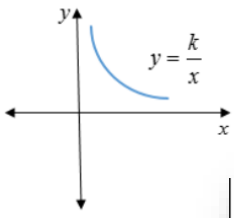
$y = kx$ for a constant k

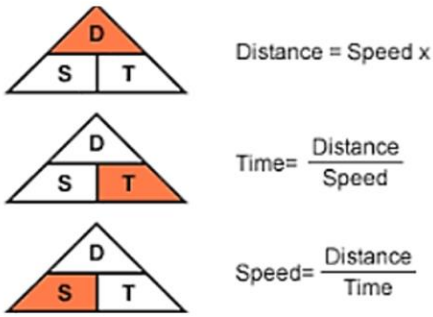


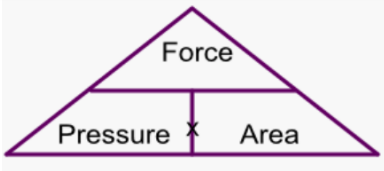
Inversely Proportional

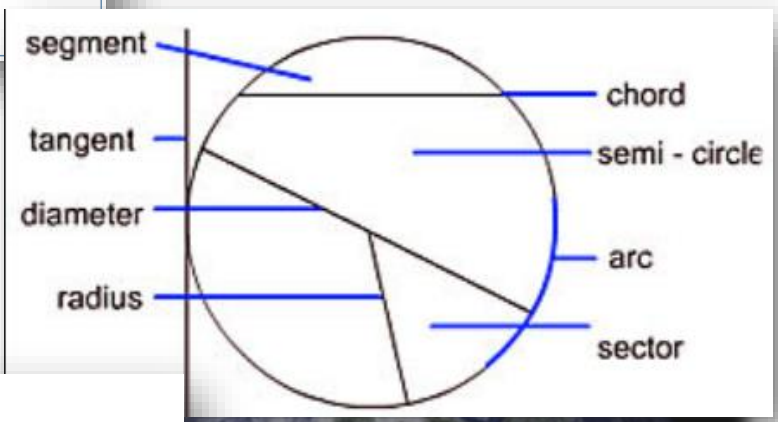
$y \propto \frac{1}{x}$

$y = \frac{k}{x}$ for a constant k









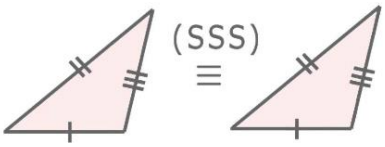
Standard Form

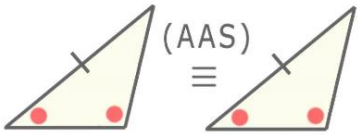
Positive Power = Large Number

$4.3 \times 10^{6} = 4\,300\,000$

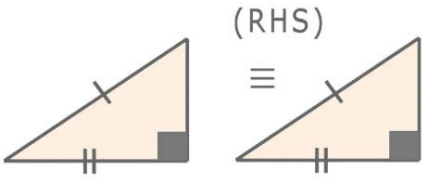
Negative Power = Small Number

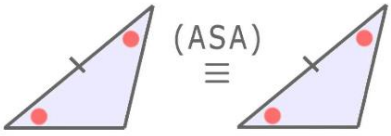
$2.1 \times 10^{-3} = 0.021$

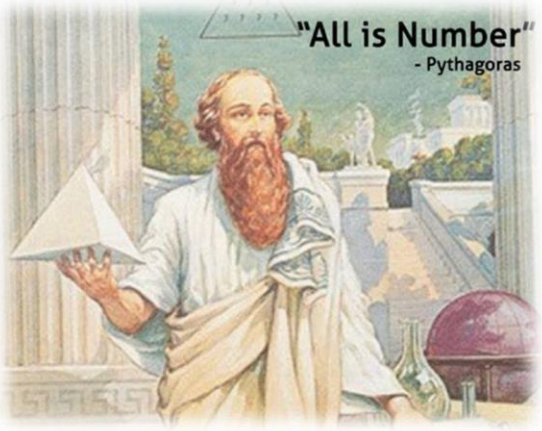


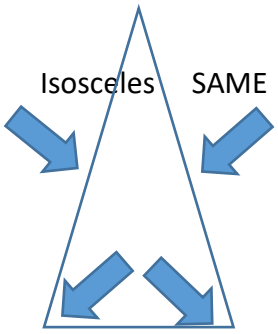


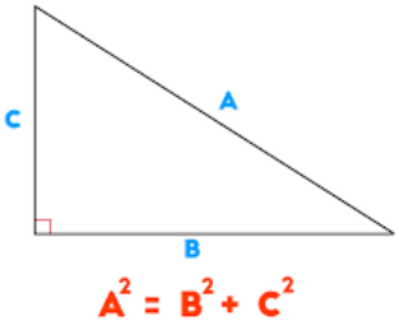
Same (congruent) triangles



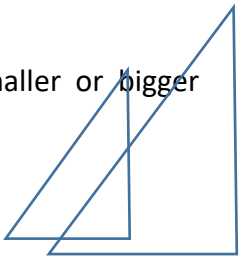


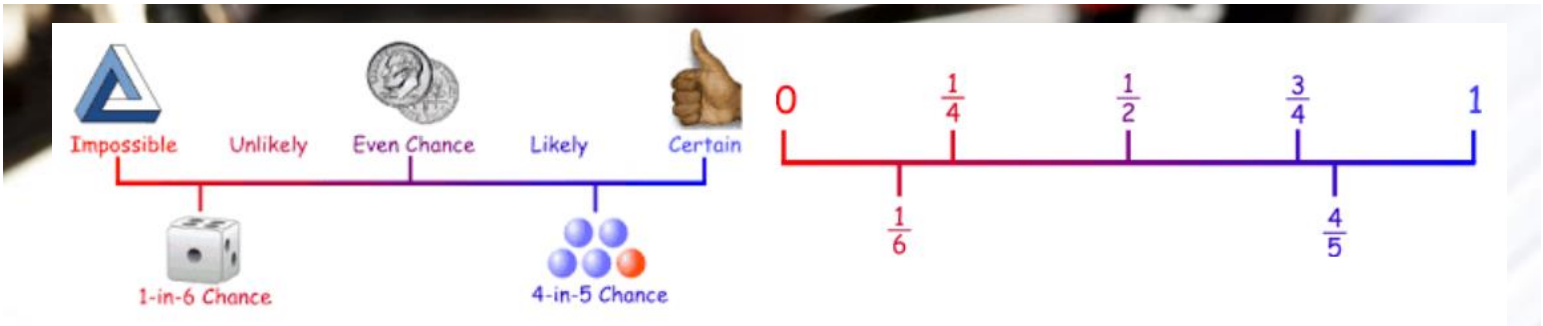


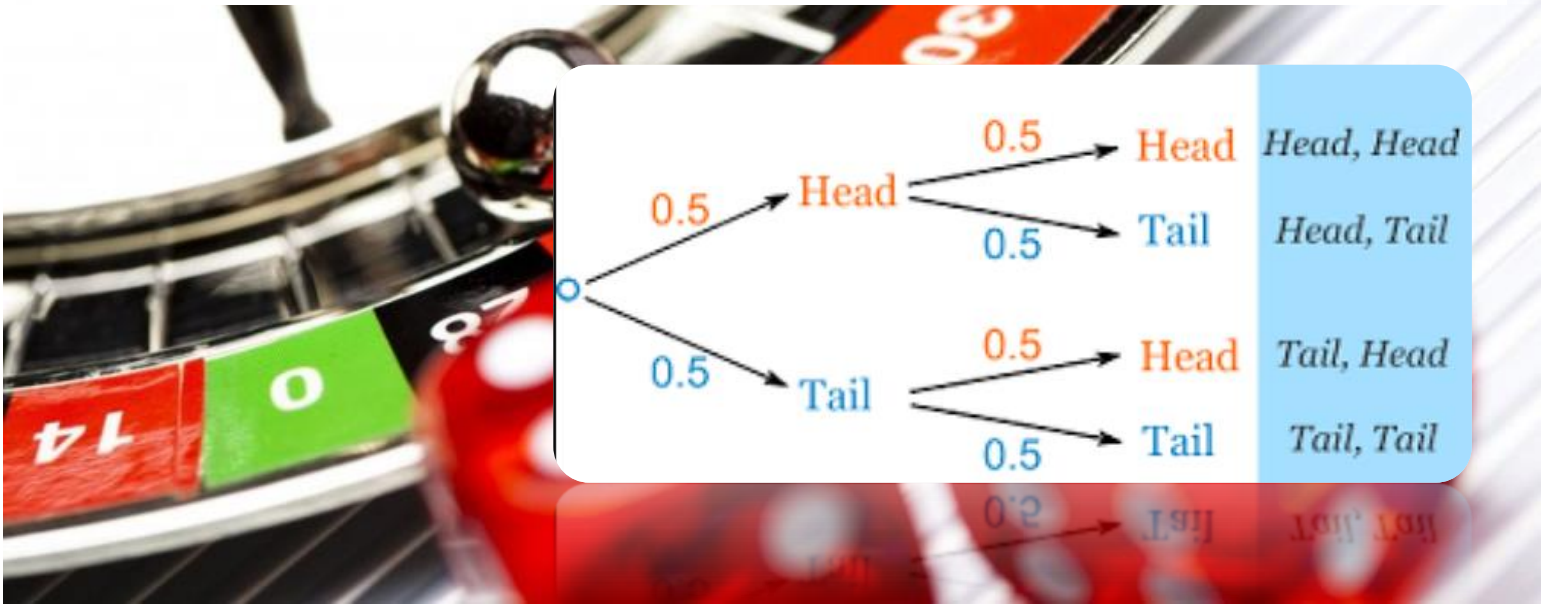


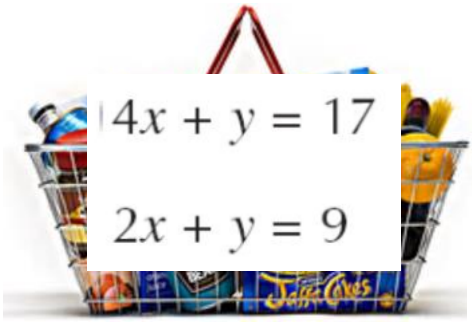


Similar – smaller or bigger









Simultaneous, .. make something the same…subtract…solve !

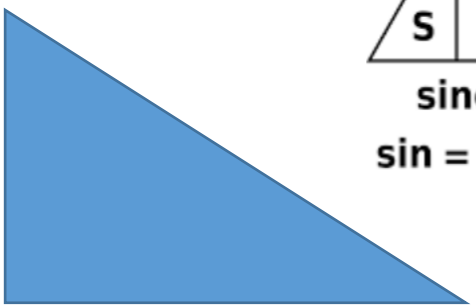
4x ////// = 17

2x ////// = 9

$$\sin A = \frac{\text{OPP}}{\text{HYP}}$$

$$\cos A = \frac{\text{ADJ}}{\text{HYP}}$$

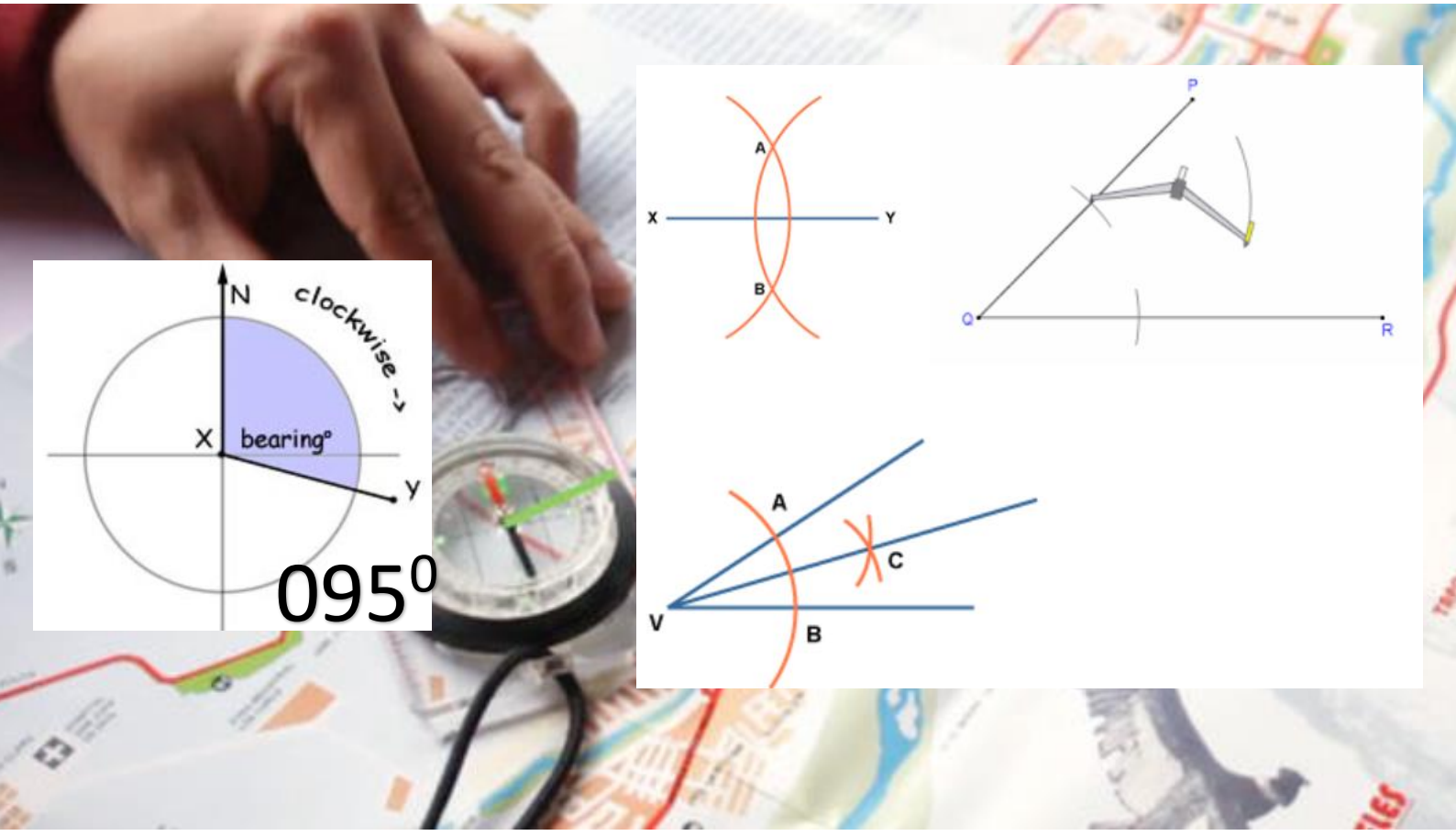
$$\tan A = \frac{\text{OPP}}{\text{ADJ}}$$

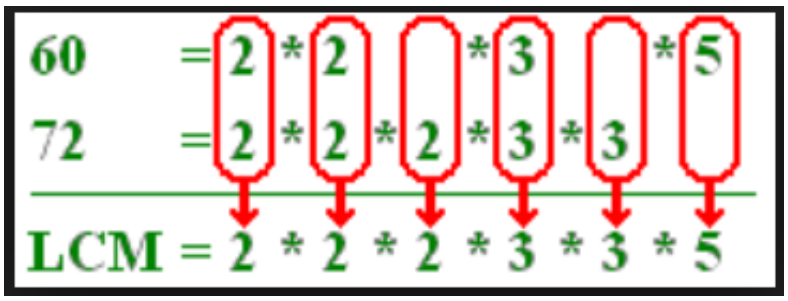


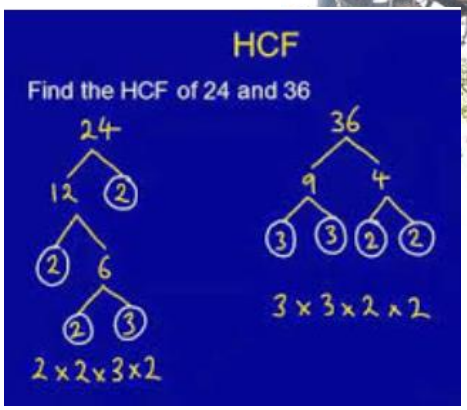
SOH — O / S H — **sine** $\sin = \frac{o}{h}$

CAH — A / C H — **cosine** $\cos = \frac{a}{h}$

TOA — O / T A — **tangent** $\tan = \frac{o}{a}$







Lowest common multiple, Highest common Factor

‘QUAD’ (4) ratics…