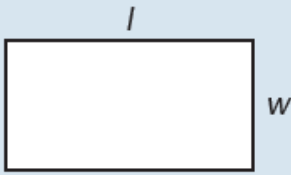
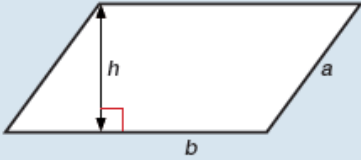
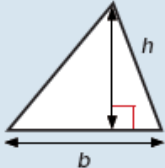
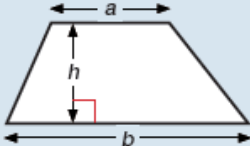


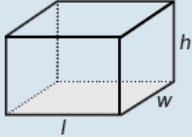
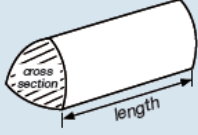

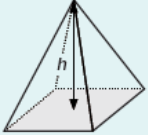
## Year 10 HIGHER Tier Learn Sheet December 2016

Formulae to learn by heart:

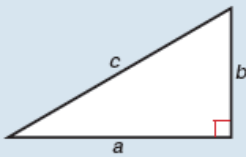

### Areas

Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2} (a + b)h$	

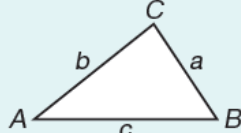
### Volumes

Cuboid = $l \times w \times h$	
Prism = area of cross section $\times$ length	
Cylinder = $\pi r^2 h$	
Volume of pyramid = $\frac{1}{3} \times$ area of base $\times$ h	

### Pythagoras

<p>Pythagoras' Theorem</p> <p>For a right-angled triangle, <math>a^2 + b^2 = c^2</math></p>	
<p>Trigonometric ratios (<i>new to F</i>)</p> <p><math>\sin x^\circ = \frac{\text{opp}}{\text{hyp}}</math>, <math>\cos x^\circ = \frac{\text{adj}}{\text{hyp}}</math>, <math>\tan x^\circ = \frac{\text{opp}}{\text{adj}}</math></p>	

### Trigonometric formulae

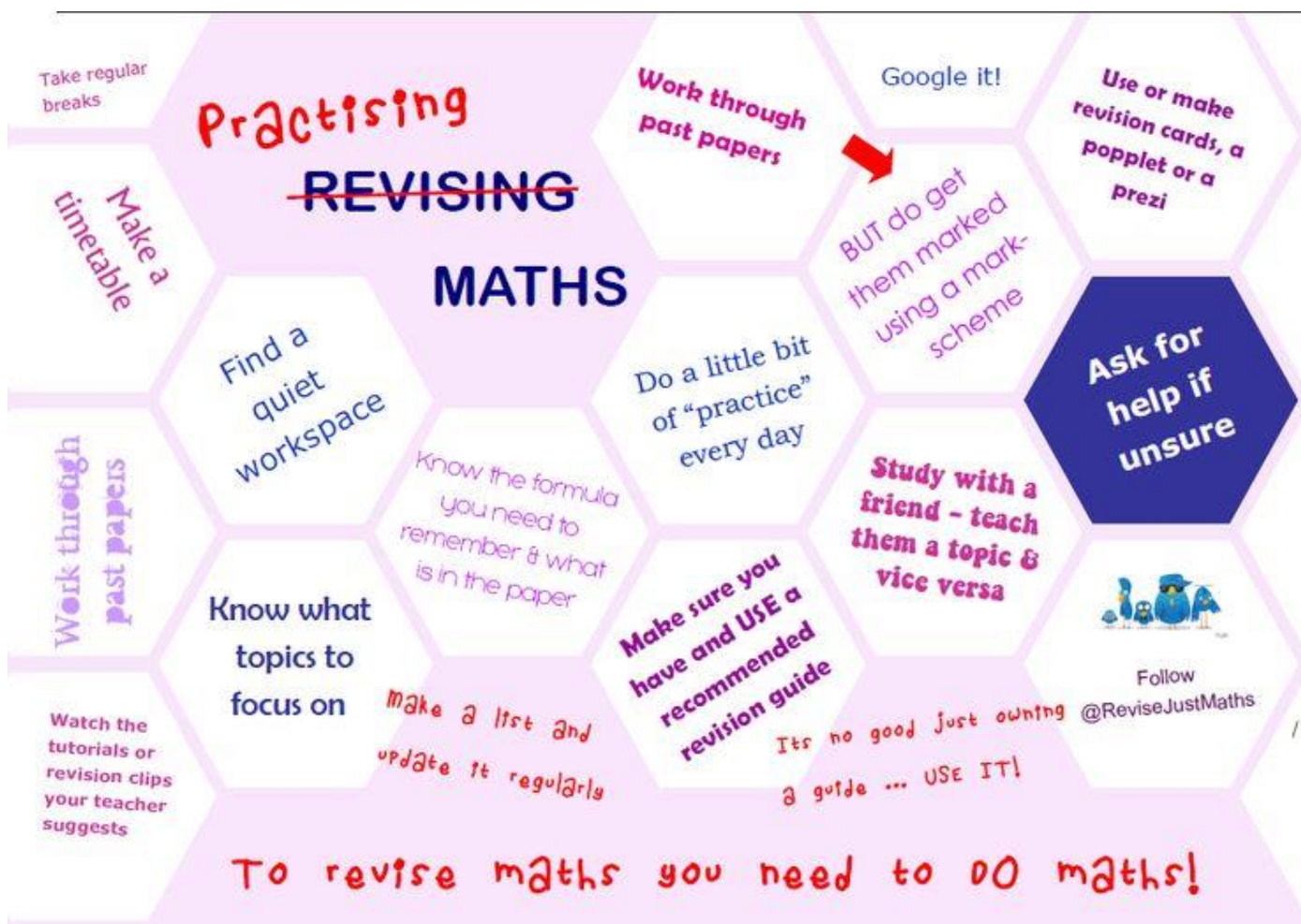
Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$	
Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$	
Area of triangle = $\frac{1}{2} ab \sin C$	

## Topics to revise

Algebraic fractions
Angle facts - int/ext angles
Arcs/Sectors/Trigonometry
Calculate probabilities
Change the subject - brackets/powers
Compound Interest
Construct box plot
Density
Equation of a circle/ Translations

Exponential functions
Formula for area of a triangle
Fractions, percentage and ratio
Interpret box plot
IQR/Quartiles from a box plot
Iteration
Iteration
Median from a table
Product rule for counting

Quadratic inequalities
Shade in regions using inequalities
Shaded regions/area involving circles
Simultaneous equations
Trigonometry
Upper and lower bounds
Upper and lower bounds
Venn diagrams
Work with "ratios of ratios"



Revision websites:

[www.mymaths.co.uk](http://www.mymaths.co.uk) (username: immanuelc password: square)

<https://www.bbc.co.uk/education/examspecs/z9p3mnb>

<http://www.mrbartonmaths.com/>

[http://www.themathsteacher.com/gcse\\_maths.php](http://www.themathsteacher.com/gcse_maths.php)

<http://studymaths.co.uk/>

<https://corbettmaths.com/>