Instructions

Target time: Less than 5m.

Champion: 2m 40s.

- Repeat this activity daily until you achieve **100% in the target time on 2 consecutive days**.
- The goal is to answer the questions **quickly** and **correctly**.
  - When you achieve fluency, it will require very little mental effort.

Step 1: Set a stopwatch to time yourself.

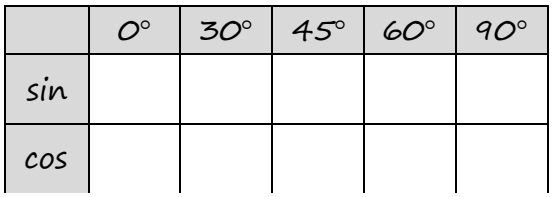
Step 2: Answer all questions on lined paper in **timed conditions**.

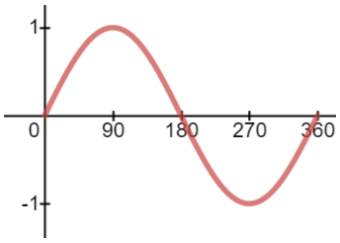
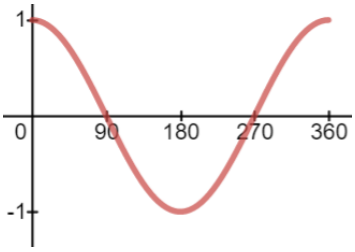
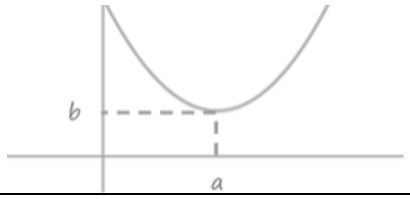
- Guess if you don't know the answer.

Step 2: **Check your answers** using the solutions on the reverse of this page.

Step 3: Fill in one of the marking columns below (enter the date in the heading).

Step 4: Use the solutions to **correct any mistakes**.

Question Set 1	Date:							
	Time taken:							
1.								
2.	When $g = 9.8\ ms^{-2}$, what is a suitable level of accuracy for your final answer?							
3.	Graph of $y = \sin x$, $0 \leq x \leq 360$ Label the x-axis every 90°.							
4.	Formulae for average velocity and average speed.							
5.	5 SUVAT equations							
6.	Graph of $y = \cos x$, $0 \leq x \leq 360$ Label the x-axis every 90°.							
7.	Sketch the graph of $y = (x - a)^2 + b$ where $a, b > 0$							
8.	Graph of $y = \tan x$, $0 \leq x \leq 360$ Label the x-axis every 90°.							

	Question	Solution
1.	<table><tr><td></td><td>0°</td><td>30°</td><td>45°</td><td>60°</td><td>90°</td></tr><tr><td>sin</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>cos</td><td></td><td></td><td></td><td></td><td></td></tr></table>	<table><tr><td></td><td>0°</td><td>30°</td><td>45°</td><td>60°</td><td>90°</td></tr><tr><td>sin</td><td>0</td><td>$\frac{1}{2}$</td><td>$\frac{1}{\sqrt{2}}$</td><td>$\frac{\sqrt{3}}{2}$</td><td>1</td></tr><tr><td>cos</td><td>1</td><td>$\frac{\sqrt{3}}{2}$</td><td>$\frac{1}{\sqrt{2}}$</td><td>$\frac{1}{2}$</td><td>0</td></tr></table>
2.	When $g = 9.8\ ms^{-2}$, what is a suitable level of accuracy for your final answer?	2 significant figures (the same as g)
3.	Graph of $y = \sin x$, $0 \le x \le 360$ Label the x-axis every 90°.	
4.	Formulae for average speed and average velocity.	$\text{Av Velocity} = \frac{\text{total displacement}}{\text{time}}$ $\text{Av Speed} = \frac{\text{total distance travelled}}{\text{time taken}}$
5.	5 SUVAT equations	$v = u + at$ $\quad v^2 = u^2 + 2as$ $s = \frac{1}{2}(u+v)t$ $\quad s = ut + \frac{1}{2}at^2$ $s = vt - \frac{1}{2}at^2$
6.	Graph of $y = \cos x$, $0 \le x \le 360$ Label the x-axis every 90°.	
7.	Sketch the graph of $y = (x-a)^2 + b$ where $a, b > 0$	
8.	Graph of $y = \tan x$, $0 \le x \le 360$ Label the x-axis every 90°.