


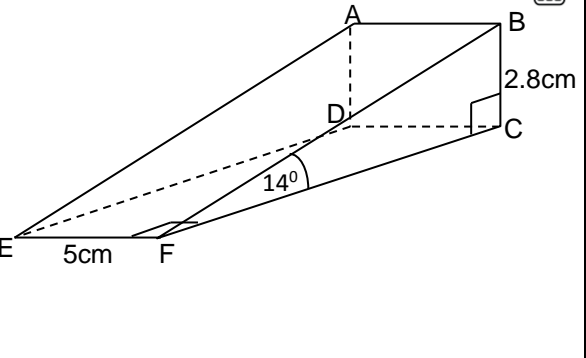
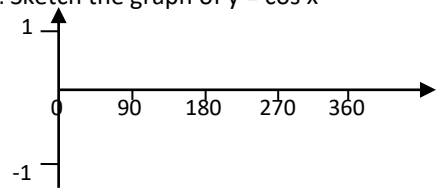

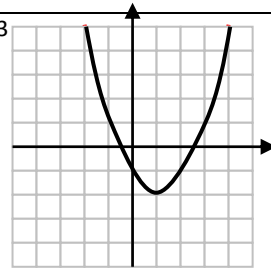
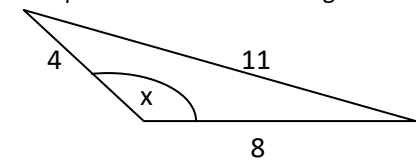
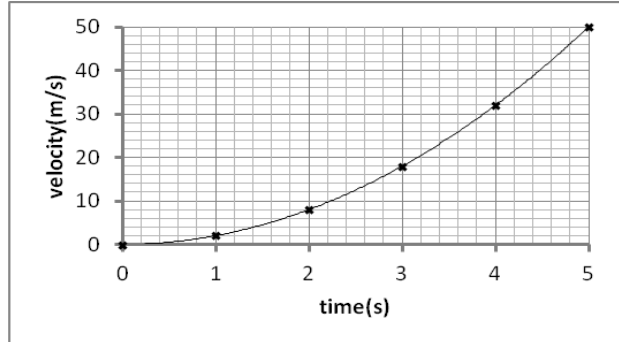
Maths Key Skills

Stage 11: Skill Check 2

Name:

Date:

Class/Group:

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure & Statistics	
1. Simplify: $\sqrt{5} \times \sqrt{15}$	11:1	11. Make (r) the new subject of: $P = \pi r + 2r + 2a$	11:12	21. Work out the length BE. (correct to 3sf)  	11:26
2. Expand & simplify: $(\sqrt{3} + 2)(\sqrt{3} + 5)$	11:2	12. Sketch the graph of $y = \cos x$ 	11:14	22. $\frac{\sin x}{8} = \frac{\sin 72^\circ}{11}$ Find x(correct to 1dp) 	11:27
3. If $x=6.4(1dp)$ and $y=8.3(1dp)$ Work out maximum value of $y - x$.	11:3	13. Sketch on the grid: $y = f(x) - 3$ 	11:15	23. Set up the formula to find angle 'x'? 	11:28
4. Simplify the following fraction: $\frac{2}{y+3} + \frac{3}{y-2}$	11:4	14. Estimate the distance travelled between 2 and 5 seconds. 	11:16	15. Write down the equation of the tangent at (1,3) on the circle $x^2 + y^2 = 10$	11:18
5. Solve: $\frac{x}{2x-3} + \frac{4}{x+1} = 1$	11:5				

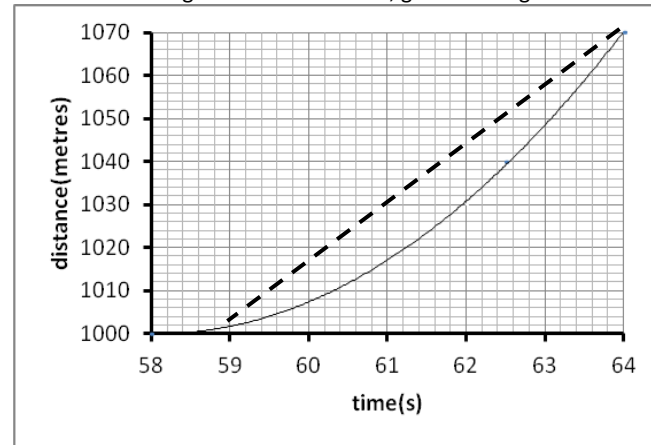
6. If $f(x) = 4x - 1$, work out: $f^{-1}(x)$

11:7

7. Find the turning point of:
 $y = x^2 - 2x + 3$

11:8

16. Estimate the gradient of the chord, give meaning & units



11:20



24. If $\vec{AB} = -\mathbf{a} + \mathbf{b}$ &

$$\vec{BC} = \frac{1}{2}(\mathbf{b} - \mathbf{a})$$

What can you say about these two vectors?

11:29

8. Solve by completing the square:
 $x^2 - 4x - 7 = 0$
(Write down the EXACT values)

11:9

17. $x^2 - 5x + 2 = 0$ can be solved using the iteration

formula: $x_{n+1} = \sqrt{5x_n - 2}$
Start with $x_1 = 4$ and work out an approximation for x by finding x_5 (correct to 2dp)



11:21

25. Complete the table:

School day absences/year (d)	Frequency	Frequency Density
$0 < d \leq 2$	30	
$2 < d \leq 4$	26	
$4 < d \leq 7$	27	
$7 < d \leq 10$	18	
$10 < d \leq 15$	20	

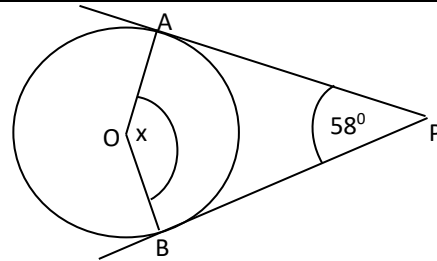
11:30

9. To solve: $2x^2 + 6x + 3 = 0$ by formula, substitute the appropriate values.

11:10

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19. O is the centre. Work out angle x .

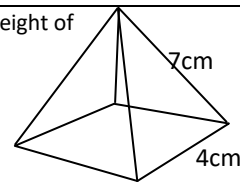


11:23

10. Write down the solution set for: $(x + 5)(x - 4) \leq 0$

11:11

20. Work out the perpendicular height of the square based pyramid. (1dp)



11:24

Total (A)

Total (B)

Total (C)

Test Total (A+B+C)

R (0-9)

Y (10-19)

G (20-25)