


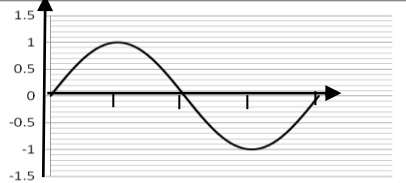
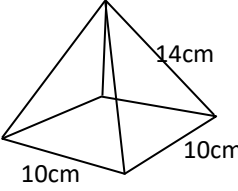
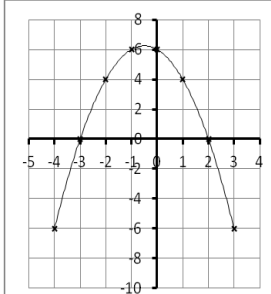

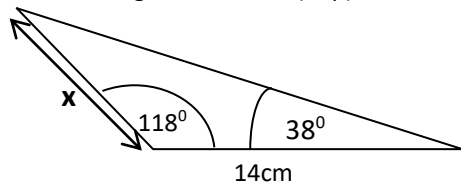
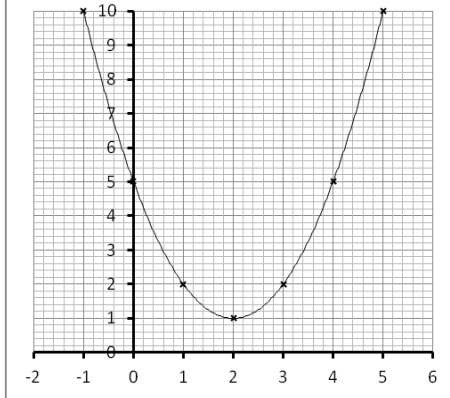

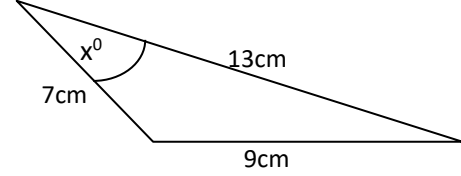
Maths Key Skills

Stage 11: Skill Check 6

Name:

Date:

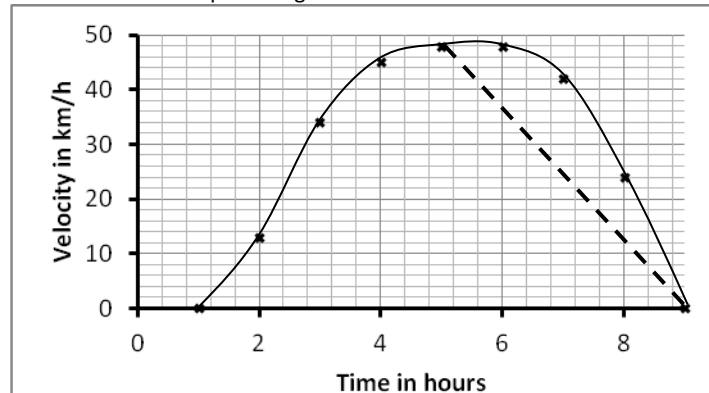
Class/Group:

A: Number & Algebra	B: Algebra, Proportion, Geometry & Measure	C: Geometry & Measure & Statistics
1. Express $\sqrt{72}$ in the form $a\sqrt{b}$	11.11 11. Make (b) the new subject of : $ab = b + x$	11:26 21. Work out the angle that the base makes with the sloping face. (correct to 3sf) <div style="text-align: right;">  </div>
2. Expand & simplify: $(2+\sqrt{3})(7-\sqrt{3})$	11:14 12. This the graph of $y = \sin x$ Give two solutions for $\sin x = -0.5$ 	
3. If $x=16.4(1dp)$ and $y=4.7(1dp)$ Work out maximum value of $x - y$	11:15 13. This is the graph of $y = f(x)$. Sketch on the grid: $y = f(x)+2$ 	11:27 22. Find the length of side 'x'? (1dp) <div style="text-align: right;">  </div> 
4. Simplify the following fraction: $\frac{8}{x-1} + \frac{3x}{(x-1)^2}$	11:16 14. Estimate the area under the graph between $x = 0$ and 4 	11:28 23. Find the size of angle 'x'? (1dp) <div style="text-align: right;">  </div> 
5. Solve: $\frac{2x+1}{7} = \frac{1}{x-2}$	11:18 15. Write down the equation of the tangent at $(-1,3)$ on the circle $x^2+y^2 = 10$	

6. If $f(x) = x^2$ and $g(x) = 2x+3$
Find the values of 'x' for which $f(x) = g(x)$.

11:7

16. Estimate & interpret the gradient of the broken line.



11:20

24. If $\overline{AB} = 2a$ and $\overline{CB} = 2a - b$
Express \overrightarrow{CA} in terms of a and b

11:29

7. Find the turning point of:
 $y = x^2 - 6x + 10$

11:8

8. Solve by completing the square:
 $x^2 + 6x - 7 = 0$

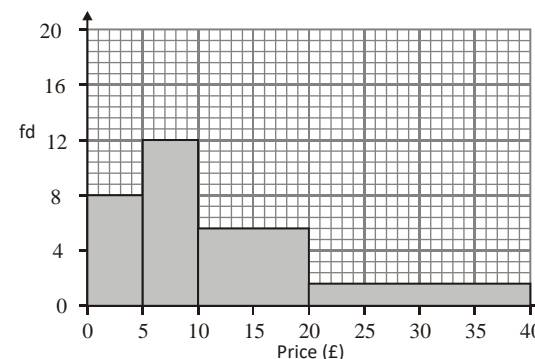
11:9

17. $x^2 - 7x + 1 = 0$ can be solved using the iteration formula:
 $x_{n+1} = \sqrt{7x_n - 1}$
Start with $x_1 = 6$ and work out an approximation for x by finding x_5 (to 2dp)



11:21

25. Use the histogram to complete the table:



11:30

18. Work out the area of this triangle (Correct to 1dp)
3.5cm, 58°, 4.6cm

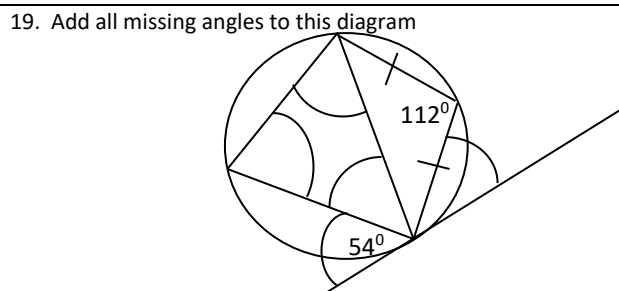


11:22

9. To solve: $4x^2 - 7x + 2 = 0$ by formula. Give EXACT answers.

11:10

±



11:23

10. Write down the solution set for $(x - 6)(x + 2) \geq 0$

11:11

20. Work out the diagonal length of this cylinder. (1dp)



11:24

Price (£)	Frequency
$0 < x \leq 5$	
$5 < x \leq 10$	
$10 < x \leq 20$	
$20 < x \leq 40$	

Total (A)

Total (B)

Total (C)

Test Total (A+B+C)

R (0-9)

Y (10-19)

G (20-25)