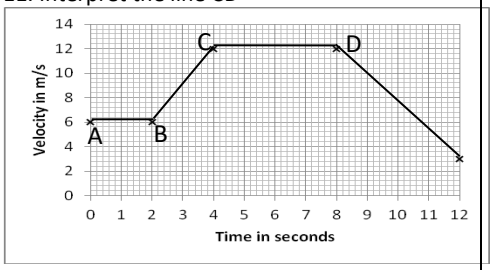
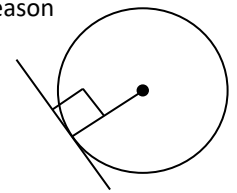
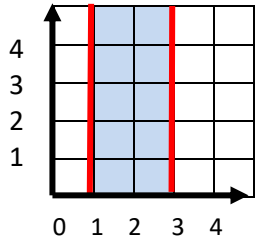
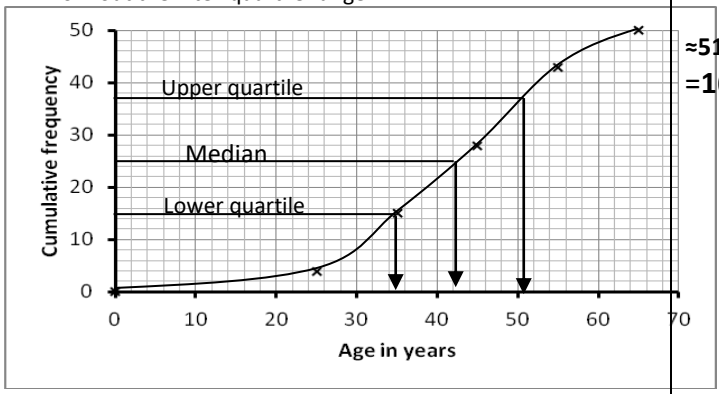
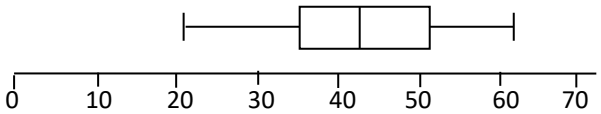
Maths Key Skills **Stage 10: Skill Check 12 Answers**

Name: ..... Date: ..... Class/Group: .....

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability	
1. Write the answer in standard form $(5x10^{-3})x(3x10^{-2})$	*10:1* **$1.5x10^{-4}$**	11. Interpret the line CD 	*10:13* **Constant velocity of 12m/s**	21. A picture 30cm high covers 360cm². A similar picture is 15cm high. What is its area?	*10:26* **90cm²**
				22. The marked angle = 90^0 Give the reason 	*10:19* **Angle between tangent and radius = 90^0**
2. Estimate to 1dp the value of : $\sqrt[3]{100}$	*10:2* **$4^3 = 64$ $5^3 = 125$ 4 and 36/61 ≈4.6**	12. What inequality is represented here? 	*10:14* **$1 \le x \le 3$**	23. A bag contains 4 red balls and 5 green balls. Two balls are selected without replacement. Work out the probability of selecting one of each colour.	*10:28* 4/9x5/8 x2 **=5/9**
				24. Work out the inter-quartile range 	*10:29* **≈51-35 =16**years
3. Evaluate: $8^{-4/3}$	*10:3* **=1/16**	13. Find the nth term of this sequence: 0, 7, 18, 33, 52 , 75	*10:15* **$2n^2+n-3$**		
4. Convert $0.\dot{6}\dot{5}$ to a fraction.	*10:4* **65/99**	14. The nth term of a geometric sequence is $v5^n$. Work out the 4th term.	*10:16* **25**		
5. Five athletes take part in the 100m race. How many different orders of finish?	*10:5* **120**	15. Work out the balance for £1500 invested for 4 years at 5.4% per annum	*10:17* **$1500x1.054^4$ £1851.20**		
6. Expand: $(x + 1)^3$ $(x+1)(x^2+2x+1)=x^3+2x^2+x+x^2+2x+1=x^3+3x^2+3x+1$	*10:6*	16. **x = 10, y = 400** Find an equation for y in terms of x if y is directly proportional to x^3	*10:18* **$y=0.4x^3$**		
7. Factorise: $12x^2 - 7x - 10$	*10:7* **(4x-5)(3x+2)**	17. Find the angle of an arc length 4π and a diameter of 12cm	*10:21* **120^0**	25. Use the graph in Q23 to draw a box plot. The maximum age was 62 years and the minimum was 21 years 	*10:30*
8. Give the gradient of a line perpendicular to: 2x – y = 8	*10:8* **- ½**	18. Give the area of sector radius 3.4cm & angle 124^0 (correct to 3sf)	*10:22* **12.5cm²**		
9. Work out the equation of a line that passes through (3,1) & (5,5)	*10:9* **y=2x-5**	19. Find the SA of a sphere of diameter 16cm (correct to 3sf) ($SA=4\pi r^2$)	*10:23* **804cm²**		
10. Work out the roots of the quadratic graph with the equation: **$x^2 - 100 = 0$**	*10:12* **x=10&-10**	20. Give the volume of a sphere of diameter 16cm (correct to 3sf) ($V = \frac{4}{3}\pi r^3$)	*10:24* **2140cm³**		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	