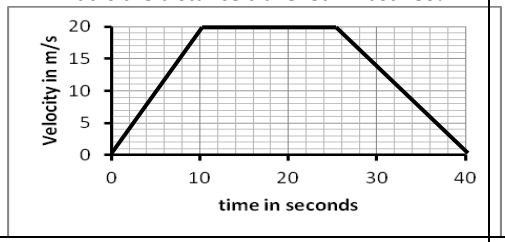
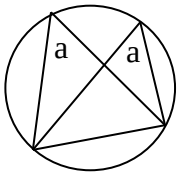
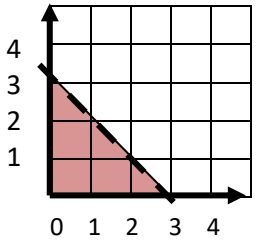
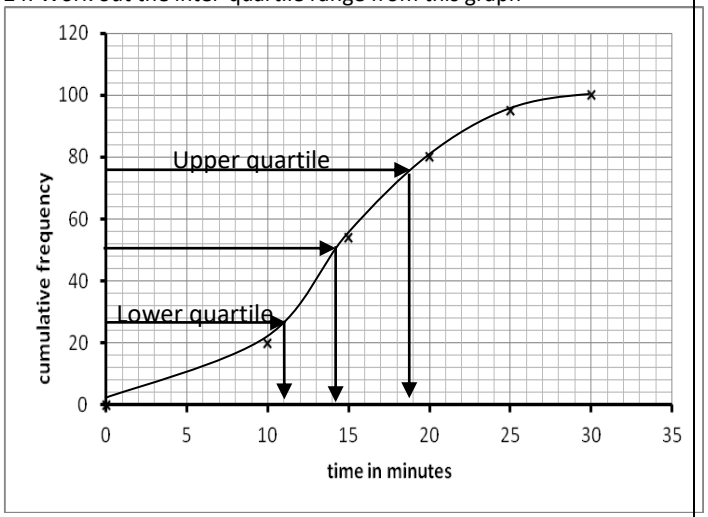
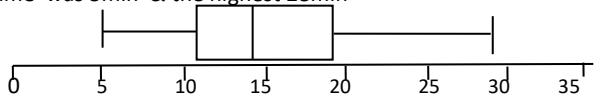
Maths Key Skills

Stage 10: Skill Check 2 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 $(4x10^3)\div(8x10^{5)}$	*10:1* **$0.5x10^{-2}$ $5x10^{-3}$**	11. What is the distance travelled in last 15s? 	*10:13* **½x15x20 =150m**	21. A garden plot is 40m². What would be the area of a plot with double the dimensions?	*10:25* **160m²**
				22. The angles marked with the letter 'a' are equal. Give the reason 	*10:19* **Angles in same segment are equal**
2. Estimate to 1dp the answer to: $\sqrt[3]{70}$	*10:2* **$4^3 = 64$ $5^3 = 125$ ≈4.1**	12. What inequality is represented here? 	*10:14* **x+y < 3**	23. A box has 3 dark and 4 milk chocolates. What is the probability of picking out 2 dark chocolates?	*10:28* **3/7x2/6=1/7**
3. Evaluate: $8^{1/3}$	*10:3* **2**	13. Find the nth term of this sequence: 11, 17, 27, 41, 59	*10:15* **$2n^2 + 9$**	24. Work out the inter-quartile range from this graph 	*10:29* **19-11 =8min**
4. Convert the recurring decimal to a fraction: $0.\dot{3}\dot{9}$	*10:4* **39/99**	14. Write down the first 3 terms of a geometric sequence which has a first term of 3 and a common ratio 2.	*10:16* **3,6,12**		
5. With 6 starters, 5 mains & 4 desserts, how many different 3 course meals are possible?	*10:5* **6x5x4 120**	15. Work out the balance for £4500 invested for 2 years at 4% per annum compound interest	*10:17* **£4867.20**		
6. Expand: $(y+3)(y+1)^2$ **$(y+3)(y^2+2y+1)= y^3+2y^2+y+3y^2+6y+3= y^3+5y^2+7y+3$**	*10:6*	16. **x = 4, y = 8** Find an equation for y in terms of x if y is directly proportional to x^2	*10:18* **$y=0.5x^2$**		
7. Factorise: $2x^2 - 5x + 3$	*10:7* **(2x-3)(x-1)**	17. Give the length of arc radius 4cm & angle 60^0 in terms of π	*10:21* **4π/3 cm**		
8. Give the slope(gradient) of a line perpendicular to: $y = 5 - 2x$	*10:8* **½**	18. Give the area of sector radius 4cm & angle 60^0 in terms of π	*10:22* **8π/3 cm²**		
9. Work out the equation of a line passing through (1,5) and (2, 7)	*10:9* **y=2x+3**	19. Give the surface area of the sphere of radius 6cm in terms of π (SA=$4\pi r^2$)	*10:23* **144π cm²**	25. Use the graph in Q23 to draw a box plot on the grid below. The lowest time was 5min & the highest 28min 	*10:30*
10. Work out the roots of the quadratic graph with the equation **$x^2 - 3x - 4 = 0$**	*10:12* **(x+1)(x-4) x=-1 & 4**	20. Give the volume of the sphere of radius 6cm in terms of π ($V = \frac{4}{3}\pi r^3$)	*10:24* **288π cm³**		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	