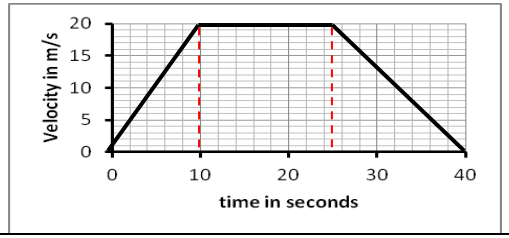
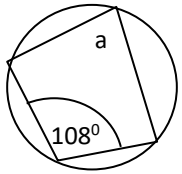
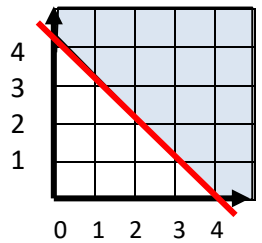
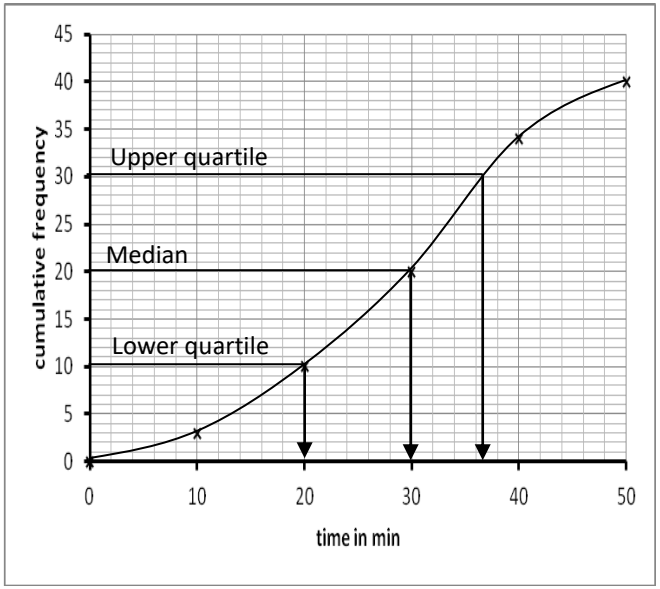
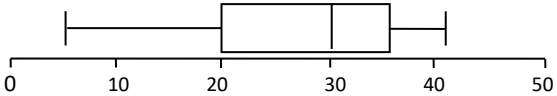
Maths Key Skills **Stage 10: Skill Check 3 Answers**

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

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability	
1. Write the answer in standard form $(3\times10^4)+(2\times10^5)$	*10:1* **230000 $=2.3\times10^5$**	11. Find the distance travelled between 10 & 25s? 	*10:13* **15x20 =300m**	21. A brick has a volume of 300cm^3. What is the volume of a brick 3 times the corresponding lengths of it?	*10:26* **8100cm^3**
				22. The angle a = 72^0 Give the reason 	*10:19* **Opp angles in a cyclic quadrilateral add up to 180^0**
2. Estimate the value of 2.34^5	*10:2* **$\approx2^5$ =32**	12. What inequality is represented here? 	*10:14* **x+y≥4**	23. A box has 3 dark and 4 milk chocolates. What is the probability of picking out 2 milk chocolates?	*10:28* 4/7 x 3/6 **=2/7**
				24. Work out the median from this graph 	*10:29* **30min**
3. Evaluate: $25^{-½}$	*10:3* **⅕**	13. Find the nth term of this sequence: 0, 3, 8, 15. 24	*10:15* **$n^2 - 1$**		
4. Convert the recurring decimal to a fraction: $0.\dot{7}$	*10:4* **7/9**	14. Find the 5th term of the geometric sequence: 2, -6, 18, ...	*10:16* **162**		
5. With 8 red balls in bag 1 & 12 blue balls in bag 2, how many ways are there for choosing a red and a blue?	*10:5* **8x12 =96**	15. Black tea has 56mg of caffeine. The caffeine decreases in the body at a rate of 15% per hour. How much is left after 3h?	*10:17* **34.391mg**		
6. Expand: $(x+2)^3$	10:5 **$(x+2)(x^2+4x+4)$ $x^3+4x^2+4x+2x^2+8x+8$ $x^3+6x^2+12x+8$**	16. **x = 5, y = 20** Find an equation for y in terms of x if y is inversely proportional to x^2	*10:18* **$y=500/x^2$**		
7. Factorise: $4x^2 - 9$	*10:7* **(2x-3)(2x+3)**	17. Give the length of arc radius 3cm & angle 120^0 in terms of π	*10:21* **2π cm**		
8. Give the slope(gradient) of a line perpendicular to: $2y=3x-8$	*10:8* **-⅔**	18. Give the area of sector radius 3cm & angle 120^0 in terms of π	*10:22* **3π cm^2**		
9. Work out the equation of a line passing through (3,4) & (5,8)	*10:9* **y=2x-2**	19. Give the curved surface area of a cone of radius 3cm & slant height 5cm in terms of π (CSA = πrl) l=slant height	*10:23* *πx3x5* **15π cm²**	25. Use the graph in Q23 to draw a box plot on the grid below. The lowest time was 5min & the highest 42min 	*10:30*
10. Work out the roots of the quadratic graph with the equation **$x^2 + 2x - 8 = 0$**	*10:12* **(x-2)(x+4)=0 x=2& -4**	20. Give the volume of a cone of radius 2cm & perpendicular height 6cm in terms of π. (V= ⅓πr²h) h=perpendicular height	*10:24* *⅓xπx2²x6* **=8π cm³**		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	