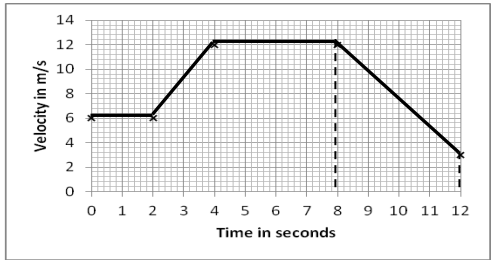
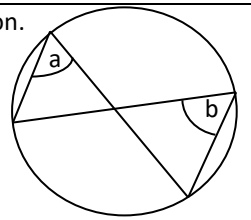
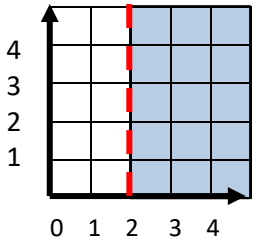
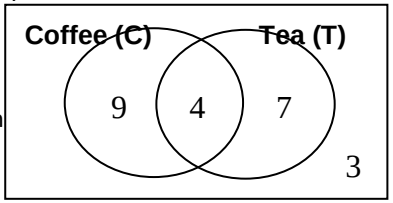
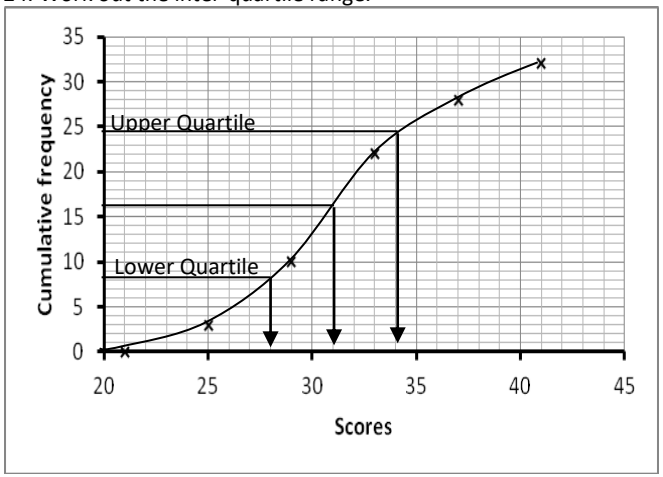
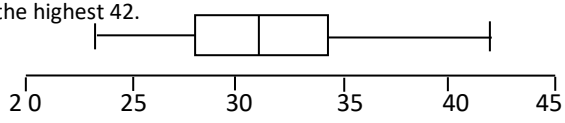
Maths Key Skills **Stage 10: Skill Check 9 Answers**

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

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability	
1. Write the answer in standard form: $(7x10^4)x(3x10^5)$	*10:1* **$2.1x10^{10}$**	11. Work out the distance travelled in the last 4s. 	*10:13* **½ (12+3)x4 =30m**	21. Bottles A & B are similar. Their heights are 20cm & 14cm.Bottle B holds 686ml. What does bottle A hold?	*10:26* **2000ml**
				22. Angle a = angle b. Give the reason. 	*10:19* **Angles in same segment are equal**
2. Estimate to 1dp the value of: $\sqrt[3]{40}$	*10:2* **$3^3 = 27$** **$4^3 = 64$** **≈3+13/37** **≈3.4**	12. What inequality is represented here? 	*10:14* **x>2**	23. The results of a survey as to who drank coffee and tea are shown below. Work out the probability that a person chosen at random drank tea, given that they drank coffee. i.e. p(T|C) 	*10:28* **4/13**
3. Evaluate: $36^{1/2}$	*10:3* **6**	13. Find the nth term of this sequence: 1, 5, 11, 19, 29, 41	*10:15* **n^2+n-1**	24. Work out the inter-quartile range. 	*10:29* **34-28 =6**
4. Convert $0.\dot{4}\dot{7}$ to a fraction.	*10:4* **47/99**	14. The first term of a geometric sequence is **5** and has a common ratio of **-3.** Write down the first 3 terms	*10:16* **5, -15, 45**		
5. The letters of the alphabet are paired up. How many different ways can they be paired with no repeats?	*10:5* **26x25= 650**	15. The value of a mobile depreciates by 40% per year. Work out the current value of a mobile bought 3 years ago for £225.	*10:17* **$225x0.6^3$ £48.60**		
6. Expand: (x+3)(x-1)(x-3)	*10:6*	16. **x = 2, y = 25** Find an equation for y in terms of x if y is inversely proportional to x^3.	*10:18* **$y=200/x^3$**		
$(x+3)(x^2-4x+3) = x^3-4x^2+3x+3x^2-12x+9) = x^3-x^2-9x+9$					
7. Factorise: $4p^2 - 9q^2$	*10:7* **(2p-3q)(2p+3q)**	17. Give the length of arc diameter 4cm & angle 90^0 in terms of π.	*10:21* **π cm**		
8. Give the gradient of a line perpendicular to: y= 2 – 5x	*10:8* **⅕**	18. Give the area of sector diameter 4cm & angle 90^0 in terms of π.	*10:22* **π cm^2**		
9. Work out the equation of a line joining (2,7) and (0,1).	*10:9* **y=3x+1**	19. Give the area of a sphere of r= 7cm in terms of π. ($SA=4\pi r^2$)	*10:23* **196π**	25. Draw the box plot using the graph on Q23. The lowest score is 23 & the highest 42. 	*10:30*
10. Work out the roots of the quadratic graph with the equation: **$x^2 - 36 = 0$**	*10:12* **x=6 & -6**	20. Give the volume of a sphere of r= 7cm in terms of π. ($V = \frac{4}{3}\pi r^3$)	*10:24* **1372π/3cm^3**		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	