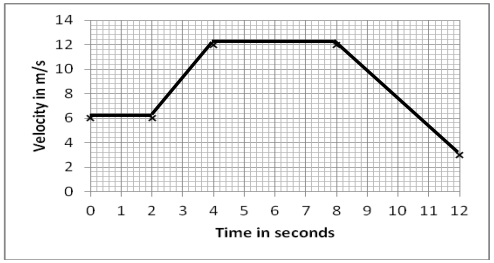
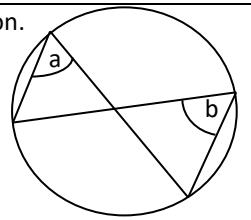
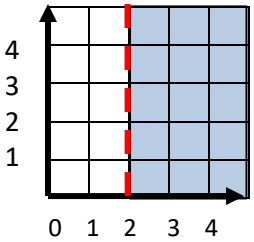
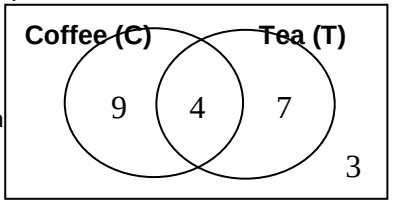
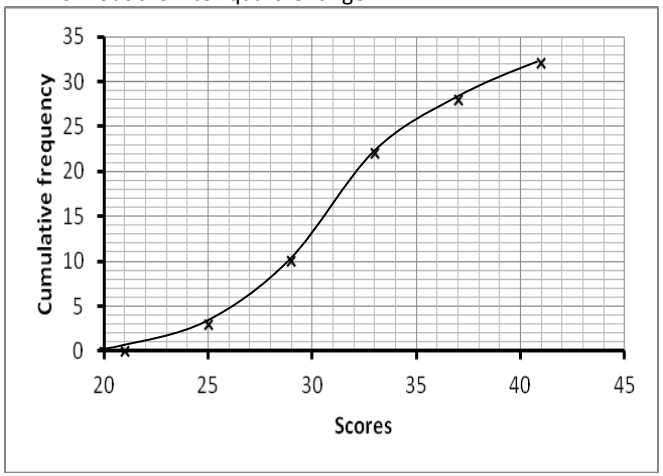
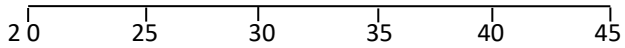
Maths Key Skills **Stage 10: Skill Check 9**

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*	11. Work out the distance travelled in the last 4s. 	*10:13*	21. Bottles A & B are similar. Their heights are 20cm & 14cm.Bottle B holds 686ml. What does bottle A hold?	*10:26*
				22. Angle a = angle b. Give the reason. 	*10:19*
2. Estimate to 1dp the value of: $\sqrt[3]{40}$	*10:2*	12. What inequality is represented here? 	*10:14*	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*
3. Evaluate: $36^{1/2}$	*10:3*	13. Find the nth term of this sequence: 1, 5, 11, 19, 29, 41	*10:15*	24. Work out the inter-quartile range. 	*10:29*
4. Convert $0.4\dot{7}$ to a fraction.	*10:4*	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. The letters of the alphabet are paired up. How many different ways can they be paired with no repeats?	*10:5*	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*		
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 $\mathbf{x^3}$.	*10:18*		
7. Factorise: $4p^2 - 9q^2$	*10:7*	17. Give the length of arc diameter 4cm & angle 90^0 in terms of π.	*10:21*		
8. Give the gradient of a line perpendicular to: y= 2 – 5x	*10:8*	18. Give the area of sector diameter 4cm & angle 90^0 in terms of π.	*10:22*		
9. Work out the equation of a line joining (2,7) and (0,1).	*10:9*	19. Give the area of a sphere of r= 7cm in terms of π. ($SA=4\pi r^2$)	*10:23*	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: $\mathbf{x^2 - 36 = 0}$	*10:12*	20. Give the volume of a sphere of r= 7cm in terms of π. ($V = \frac{4}{3}\pi r^3$)	*10:24*		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	