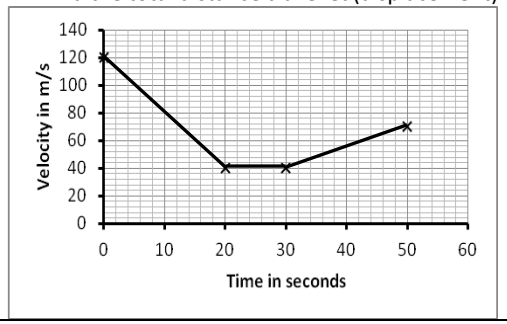
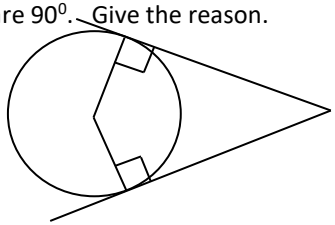
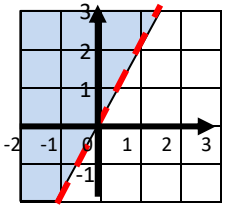
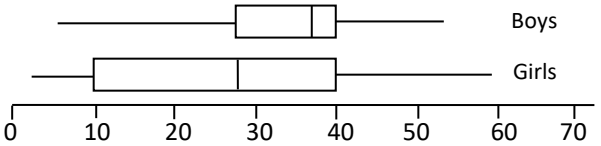
Maths Key Skills **Stage 10: Skill Check 14**

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

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability	
1. Write the answer in standard form $(8x10^5)\div(2x10^{-2})$	*10:1*	11. Find the total distance travelled(displacement) 	*10:13*	21. Two similar TV screens have areas $220cm^2$ & $495cm^2$. The length of the smaller one is 21cm. Find the length of the other?	*10:26*
				22. The marked angles are 90^0. Give the reason. 	*10:19*
2. Estimate to 1dp the value of : $\sqrt{220}$	*10:2*	12. What inequality is represented here? 	*10:14*	23. There are 3 red, 4blue and 2 orange lollies in the freezer. Carl takes one lolly and eats it. He then takes a second one. What is the probability that he picked out two the same colour?	*10:28*
3. Evaluate: $32^{-\frac{2}{5}}$	*10:3*	13. Find the nth term of this sequence: -3, -3, -1, 3, 9, 17	*10:15*	24. Complete the cumulative frequency table	*10:29*
4. Convert $0.1\dot{2}\dot{6}$ to a fraction.	*10:4*	14. Give the common ratio for this geometric sequence: 2, -2√7, 14, ...	*10:16*		
5. T-shirts are black or white & come in small, medium & large. How many different types T-shirt are there?	*10:5*	15. A village with a population of 5600 predicted that its population would increase by 6% each year. Give the population in 10years.	*10:17*		
6. Expand: (y-1)(y-3(y-2)	*10:6*	16. **d=80 and t=4** Find an equation for d in terms of t if d is directly proportional to t^2	*10:18*		
7. Factorise: $3x^2 - 13x - 10$	*10:7*	17. Find the angle of an arc of length 12cm and a radius of 8cm correct to nearest whole degree.	*10:21*		
8. Give the gradient of a line perpendicular to: $y = 8 - \frac{2}{3}x$	*10:8*	18. Give the area of sector diameter 12cm & angle 224^0 (correct to 3sf)	*10:22*	25. The box for girls' test scores is much bigger than the box for boys' test scores. What does this imply? 	*10:30*
9. Work out the equation of a line joining (1,1) and (0,3)	*10:9*	19. Find the CSA of a cone of radius 7cm & slant height 9cm (correct to 3sf). (CSA = πrl) l=slant height	*10:23*		
10. Work out the roots of the quadratic graph with the equation: $x^2 + 6x + 9 = 0$	*10:12*	20. Give the volume of a cone of radius 4.5cm & perpendicular height 9cm(3sf) (V= $\frac{1}{3}\pi r^2 h$) h=perpendicular height	*10:24*		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	

Speed(mph)	frequency	Speed(mph)	Cumulative frequency
40 ≤ s < 50	4	40 ≤ s < 50	
50 ≤ h < 60	19	40 ≤ h < 60	
60 ≤ h < 70	34	40 ≤ h < 70	
70 ≤ h < 80	27	40 ≤ h < 80	
80 ≤ h < 90	14	40 ≤ h < 90	
90 ≤ h < 100	2	40 ≤ h < 100	