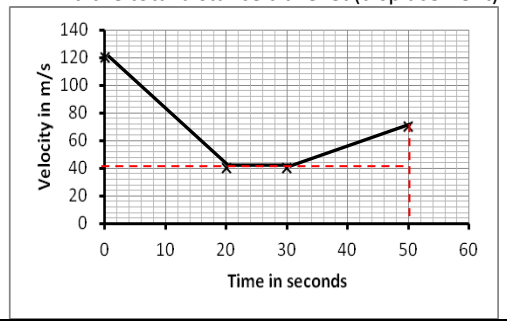
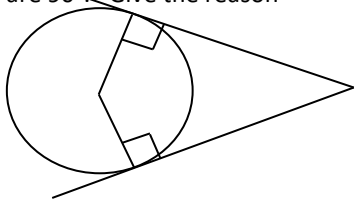
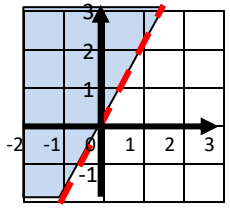
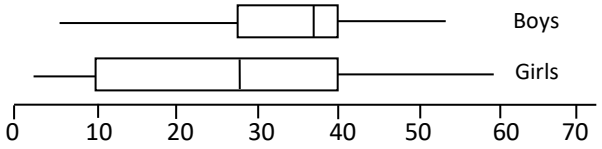
Maths Key Skills **Stage 10: Skill Check 14 Answers**

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

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability	
1. Write the answer in standard form $(8x10^5)\div(2x10^{-2})$	*10:1* **$4x10^7$**	11. Find the total distance travelled(displacement) 	*10:13* **½x20x80 + ½ x20x30 + 50x40 = 3100m**	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* Sf=1.5 **31.5cm**
				22. The marked angles are 90^0. Give the reason 	*10:19* **Angle between tangent & radius = 90^0**
2. Estimate to 1dp the value of : $\sqrt{220}$	*10:2* **$15^2 = 225$** **$14^2 = 196$** **14 & 24/29** **≈14.8**	12. What inequality is represented here? 	*10:14* **y>2x**	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? 3/9x2/8 + 4/9x3/8 + 2/9x1/8 = 20/72 = **5/16**	*10:28*
3. Evaluate: $32^{-2/5}$	*10:3* **1/4**	13. Find the nth term of this sequence: -3, -3, -1, 3, 9, 17	*10:15* **n^2-3n-1**	24. Complete the cumulative frequency table	*10:29*
4. Convert $0.1\dot{2}\dot{6}$ to a fraction.	*10:4* $\frac{125}{990}=\frac{25}{198}$	14. Give the common ratio for this geometric sequence: 2, -2√7, 14, ...	*10:16* **-√7**		
5. T-shirts are black or white & come in small, medium & large. How many different types T-shirt are there?	*10:5* **6**	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* **10028**		
6. Expand: (y-1)(y-3(y-2) $(y-1)(y^2-5y+6) = y^3-5y^2+6y-y^2+5y-6= y^3-6y^2+11y-6$	*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* **$d=5t^2$**		
7. Factorise: $3x^2 - 13x - 10$	*10:7* **(3x+2)(x–5)**	17. Find the angle of an arc of length 12cm and a radius of 8cm correct to nearest whole degree.	*10:21* **86^0**		
8. Give the gradient of a line perpendicular to: $y = 8 - \frac{2}{3}x$	*10:8* **3/2**	18. Give the area of sector diameter 12cm & angle 224^0 (correct to 3sf)	*10:22* **70.4cm²**	25. The box for girls' test scores is much bigger than the box for boys' test scores. What does this imply? 	*10:30* Boys are more consistent than girls
9. Work out the equation of a line joining (1,1) and (0,3)	*10:9* **y=-2x+3**	19. Find the CSA of a cone of radius 7cm & slant height 9cm (correct to 3sf). (CSA = πrl) l=slant height	*10:23* **198cm²**		
10. Work out the roots of the quadratic graph with the equation: **$x^2 +6x +9 =0$**	*10:12* **x = -3**	20. Give the volume of a cone of radius 4.5cm & perpendicular height 9cm(3sf) ($V=\frac{1}{3}\pi r^2h$) h=perpendicular height	*10:24* **191cm³**		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	

Speed(mph)	f	Speed(mph)	cf
40 ≤ s < 50	4	40 ≤ s < 50	4
50 ≤ h < 60	19	40 ≤ h < 60	23
60 ≤ h < 70	34	40 ≤ h < 70	57
70 ≤ h < 80	27	40 ≤ h < 80	84
80 ≤ h < 90	14	40 ≤ h < 90	98
90 ≤ h < 100	2	40 ≤ h < 100	100