

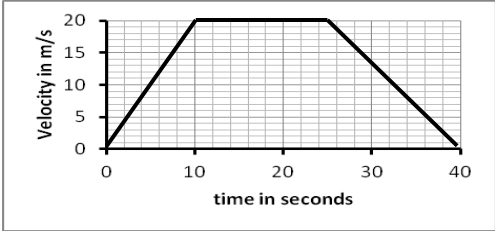
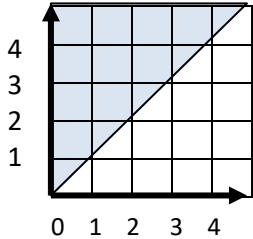
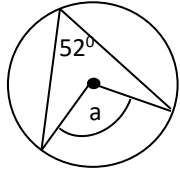
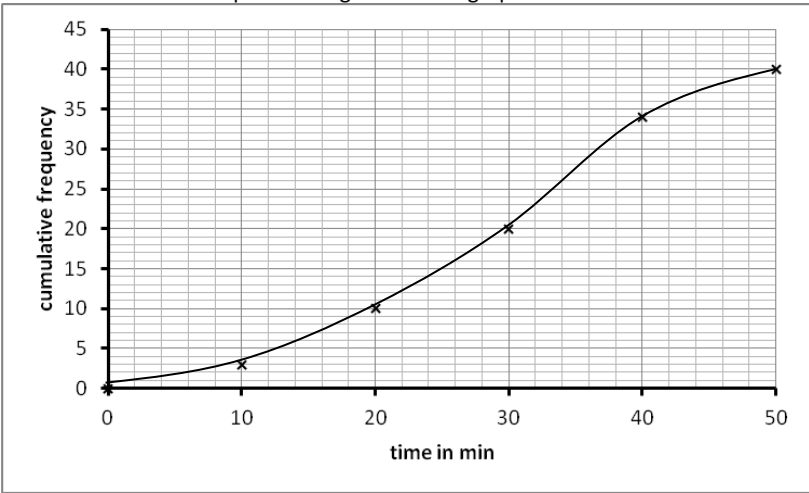

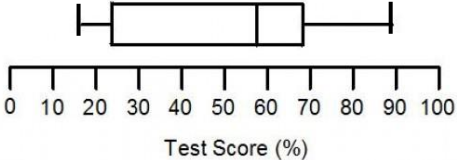



# Maths Key Skills

# Stage 10: Skill Check 4

Name: .....

Date: .....

Class/Group: .....

A: Number & Algebra		B: Algebra, Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability	
1. Write the answer in standard form: $(6 \times 10^5) - (1 \times 10^4)$	10:1	11. Find the total distance travelled. 	10:13	21. A shape has an area of $16\text{cm}^2$ . What is the area of a shape which is $\frac{1}{2}$ the corresponding lengths of it?	10:25
2. Estimate to 1dp the value of: $\sqrt[3]{85}$	10:2	12. What inequality is represented here? 	10:14	22. The angle $a = 104^\circ$ . Give the reason. 	10:19
3. Evaluate: $9^{-\frac{1}{2}}$	10:3	13. Find the nth term of this sequence: 2, 6, 12, 20, 30, 42 .....	10:15	23. A bag has 4 black balls and 2 white balls. Work out the probability that if 2 are chosen at random, they will both be black	10:28
4. Convert the recurring decimal to a fraction: $0.\overline{628}$	10:4	14. Find the 5th term of the geometric sequence: 2, $2\sqrt{3}$ , 6, ...	10:16	24. Work out the inter-quartile range from this graph 	10:29
5. How many different labels can be made using a letter & a number using letters A,B,C,D & numbers 0,1,2,3,4,5,6?	10:5	15. Espresso coffee contains 75mg of caffeine. In the body its levels decrease by 15% per hour. How much is left after 4h? 	10:17		
6. Expand: $(y+3)(y+1)(y-1)$	10:6	16. $x = 3, y = 18$ Find an equation for y in terms of x if y is directly proportional to $x^2$	10:18	25. Estimate the inter-quartile range from this box plot 	10:30
7. Factorise: $2x^2 - 7x + 6$	10:7	17. Give the length of arc radius 3cm & angle $40^\circ$ in terms of $\pi$	10:21		
8. Give the gradient of a line perpendicular to: $y = \frac{1}{5}x - 1$	10:8	18. Give the area of sector radius 3cm & angle $40^\circ$ in terms of $\pi$ 	10:22		
9. Work out the equation of a line passing through (2,1) & (-1,-8)	10:9	19. Give the curved surface area of a cone of $r = 6\text{cm}$ & slant height 7cm in terms of $\pi$ (CSA = $\pi r l$ ) l=slant height 	10:23		
10. Work out the roots of the quadratic graph with the equation $x^2 + x - 2 = 0$	10:12	20. Give the volume of a cone of radius 8cm & perpendicular height 8cm in terms of $\pi$ . ( $V = \frac{1}{3}\pi r^2 h$ ) 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)