

# Maths Key Skills

# Stage 9: Skill Check 13

Name: .....

Date: .....

Class/Group: .....

A: Number & Algebra		B: Proportion, Geometry & Measure		C: Geometry & Measures, Statistics & Probability															
1. Write $34 \times 10^5$ in standard form	9:1	11. Work out the <b>interest</b> on £700 over 5 years at 8% simple interest	9:13	21. <b>Of 50 people</b> 31 liked football 20 liked tennis 3 liked both Complete the Venn diagram	9:27														
2. Write $44 \times 10^{-3}$ in standard form	9:1	12. After VAT of 20% was added, the bill was £540. What was the bill before VAT?	9:14																
3. <b>23</b> has been rounded to 2sf Express the limits in the form $a \leq x < b$	9:2 $\leq x <$	13. Density = $140\text{kg/m}^3$ Mass 420kg What is the Volume?	9:15																
4. Factorise: $y^2 - 2y - 35$	9:4	14. 5 men took 14 days to do a project. How many men would be able to do it in 10 days?	9:16	22. A coloured bead is chosen from each bag. Complete:	9:28														
5. If $0 < 3x \leq 9$ , show the solution for $x$ on the number line 	9:5	15. The two shapes are similar. Find $x$ 	9:17																
6. Make 'y' the subject of the equation $5x + 2y = 10$	9:6	16. Work out the PERIMETER of the semi-circle with a diameter of 14cm(2sf)	9:18	23. From the Tree diagram work out the probability that two the same were chosen	9:28														
7. Solve the equation: $\frac{y-1}{3} + \frac{2y+1}{4} = 2$	9:7	17. Work out the <b>curved</b> surface area of a cylinder with $d = 3\text{m}$ & $h = 5\text{m}$ (3sf)	9:20	24. Construct the perpendicular bisector of AC.	9:25														
8. Is $y = 3x + 2$ parallel to $y - 5 = 3x$ ?	9:8	18. These triangles may not be congruent-Why? 	9:21																
9. Work out the gradient of the line – give units 	9:9	19.  Work out length 'x' (to 1dp)	9:22	25. A dice is rolled 30 times. The results are: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>1</td><td>3</td></tr> <tr><td>2</td><td>5</td></tr> <tr><td>3</td><td>11</td></tr> <tr><td>4</td><td>2</td></tr> <tr><td>5</td><td>4</td></tr> <tr><td>6</td><td>5</td></tr> </tbody> </table> Does this mean the dice is biased? Give a reason.	Score	Frequency	1	3	2	5	3	11	4	2	5	4	6	5	9:29
Score	Frequency																		
1	3																		
2	5																		
3	11																		
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5	4																		
6	5																		
10. Evaluate $10 - y^3$ when $y = -2$	9:12	20. If $\cos x = \frac{2}{7}$ , work out angle $x$ (2sf)	9:23	<b>YES or NO – circle your choice</b> Reason.....															
Total (A)		Total (B)		Total (C)															
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)															