

# Maths Key Skills

Name: .....

Date: .....

# Stage 9: Skill Check 2 Answers

Class/Group: .....

A: Number & Algebra		B: Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability									
1. Write $5.3 \times 10^3$ as an ordinary number	9:1 <b>5300</b>	11. Work out the balance on £500 over 2 years at 5% compound interest	9:13 <b>£551.25</b>	21. Group B take Biology and group C take Chemistry. Shade the Venn diagram for those who take both subjects. 	9:27								
2. Write $2.4 \times 10^{-2}$ as an ordinary number	9:1 <b>0.024</b>	12. The water bill had a 40% increase to £63. Find the original bill	9:14 <b>£45</b>										
3. 8cm has been rounded to 1sf. Express the limits in the form $a \leq x < b$	9:2 <b><math>7.5 \leq x &lt; 8.5</math></b>	13. 4kg of metal has a volume of $1.25\text{m}^3$ . What is its density?	9:15 <b><math>3.2\text{kg/m}^3</math></b>										
4. Solve: $x^2 - 3x - 4 = 0$	9:4 <b><math>x = 4 \text{ or } -1</math></b>	14. The time taken to paint a room is directly proportional to the number of people painting the room. TRUE or FALSE?	9:16 <b>FALSE</b>	22. The probability a team will win cricket is 0.3, & win football is 0.6. Complete the tree diagram. 	9:28								
5. Solve: $3x - 1 \geq 8$ and show the solution on the number line 	9:5	15. The two shapes are similar. Find x 	9:17 $Sf = 4 \div 3.2 = 1.25$ $x = 7.5 \div 1.25 = 6\text{cm}$										
6. Make 'y' the subject of the equation $3x + 4y = 12$	9:6 <b><math>y = 3 - \frac{3}{4}x</math></b>	16. In multiples of $\pi$ , work out the perimeter of a semicircle of diameter 7cm	9:18 <b><math>3.5\pi + 7\text{cm}</math></b>	23. Use the tree diagram to work out the probability that the team will lose both games <b>0.28</b>	9:28								
7. Solve the equation: $\frac{x}{2} - 3 = 1$	9:7 <b><math>x = 8</math></b>	17. Work out the curved surface area of this cylinder in terms of $\pi$ 	9:20 $2\pi r h = 2\pi \times 5 \times 10 = 60\pi \text{ cm}^2$										
8. Write down the equation of a line parallel to $y = 3x + 2$	9:8 <b><math>y = 3x \pm c</math></b>	18. Give the condition of congruency: 	9:21 <b>ASA</b>	24. Construct the perpendicular bisector of the line segment 	9:25								
9. Give the rate of savings 	9:9 <b>£100/mth</b>	19.  To find 'x' choose one calculation: Circle choice $\sqrt{7^2 + 4^2}$ OR $\sqrt{7^2 - 4^2}$	9:22										
10. Evaluate: $5t^2 - 7$ when $t = 4$	9:12 <b><math>80 - 7 = 73</math></b>	20. If $\sin x = \frac{3}{5}$ , find x (nearest $^\circ$ )	9:23 <b><math>37^\circ</math></b>	25. A homework survey was conducted by 3 students <table border="1"> <thead> <tr> <th>Students</th> <th>Number of people surveyed</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>10</td> </tr> <tr> <td>B</td> <td>50</td> </tr> <tr> <td>C</td> <td>100</td> </tr> </tbody> </table> Maggie says "Carol's results will be the most accurate" Why? <div style="border: 1px solid black; padding: 5px;">because an increased sample size generally leads to a better estimate of a population's characteristics</div>	Students	Number of people surveyed	A	10	B	50	C	100	9:29
Students	Number of people surveyed												
A	10												
B	50												
C	100												
<b>Total (A)</b>		<b>Total (B)</b>											
<b>Test Total (A+B+C)</b>		<b>R (0-9)</b>	<b>Y (10-19)</b>	<b>G (20-25)</b>									