

Maths Key Skills

Name:

Date:

Stage 9: Skill Check 7 - Answers

Class/Group:

A: Number & Algebra		B: Proportion, Geometry & Measure		C: Geometry & Measure, Statistics & Probability											
1. Write 40 000 in standard form	9:1 4×10^4	11. Work out the balance on £600 over 2 years at 4% simple interest	9:13 £648	21. Work out the p(neither B nor C)	9:27 $\frac{2}{15}$										
2. Write 0.00007 in standard form	9:1 7×10^{-5}	12. A bill £198 includes a 10% service charge. Find the bill prior to the charge.	9:14 £180												
3. 200 has been rounded to nearest 100. Express the limits in the form $a \leq x < b$	9:2 $150 \leq x < 250$	13. Mass=4800kg Density = 800kg/m ³ . What is the Volume?	9:15 $6m^3$												
4. Factorise: $x^2 + 6x + 5$	9:4 $(x+5)(x+1)$	14. Are x & y in DIRECT or INVERSE proportion? <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>x</td><td>1</td><td>2</td><td>4</td><td>8</td></tr> <tr><td>y</td><td>80</td><td>40</td><td>20</td><td>10</td></tr> </table>	x	1	2	4	8	y	80	40	20	10	9:16 INVERSE	22. I meet 2 sets of traffic lights. Complete the tree diagram.	9:28
x	1	2	4	8											
y	80	40	20	10											
5. If $3 \leq x \leq 8$, show the solution for x on the number line.	9:5 	15. The two shapes are similar. Find x.	9:17 Sf=6÷4=1.5 x=1.5x5= 7.5cm												
6. Make 'p' the subject of the equation $q = \frac{p}{r} + s$	9:6 $p=r(q-s)$	16. Work out the area of the $\frac{1}{4}$ circle (to 3sf)	9:18 $\pi \times 5^2 \div 4$ 19.6cm²												
7. Solve the equation: $\frac{y}{2} + \frac{y}{4} = 1$	9:7 $3y=4$ $y=4/3=1\frac{1}{3}$	17. Work out the curved surface area of this cylinder in terms of π .	9:20 $2\pi r h = 2\pi \times 3 \times 12$ $=72\pi$ cm²	23. Use the tree diagram to work out the probability of that I meet RED only on the second set.	9:28 $0.6 \times 0.3 = 0.18$										
8. Write down the equation of a line parallel to $2x + y = 7$	9:8 $y = -2x \pm c$ $y = \pm c - 2x$ $2x + y = \pm c$	18. Give the condition of congruency:	9:21 AAS	24. Name the shortest distance from X to the line YZ.	9:26 C The perpendicular is the shortest distance										
9. Give the gradient & its meaning.	9:9 45km/h or $\frac{3}{4}$ km/min	19. Work out length 'x' (to 1dp)	9:22 $\sqrt{10^2 - 7^2}$ =7.1cm	25. To do a survey on Year 9, the teacher took the lists and chose every 5 th person. Do you think this was a good method to get a sample? Give a reason.	9:29										
10. Evaluate $T = 2x^3$ when $x = 3$	9:12 $T = 2 \times 3^3 = 54$	20. Complete the sentence $\cos 53 = \frac{x}{7}$	9:23 	YES or NO - circle your response. Reason It is systematic sampling without bias.											
Total (A)		Total (B)		Total (C)											
Test Total (A+B+C)		R (0-9)		Y (10-19)											
				G (20-25)											