

Level 5 Test – Skills

Name

Number Facts Section 2 minutes Non-calculator

10 points minus 1 point per incorrect or missing answer. Minimum 0.

Score: /10

| | Question | Answer | Tick |
|-----|--------------|--------|------|
| Q1 | $9 + 6$ | | |
| Q2 | $11 - 5$ | | |
| Q3 | 7×7 | | |
| Q4 | $12 - 9$ | | |
| Q5 | $6 + 1$ | | |
| Q6 | $28 \div 4$ | | |
| Q7 | 6×9 | | |
| Q8 | $13 - 9$ | | |
| Q9 | $7 + 9$ | | |
| Q10 | 8×3 | | |
| Q11 | 4×6 | | |
| Q12 | $36 \div 6$ | | |
| Q13 | $9 + 7$ | | |
| Q14 | $40 \div 5$ | | |
| Q15 | $16 - 9$ | | |

| | Question | Answer | Tick |
|-----|--------------|--------|------|
| Q16 | 7×3 | | |
| Q17 | $10 - 6$ | | |
| Q18 | $9 + 5$ | | |
| Q19 | $42 \div 6$ | | |
| Q20 | $36 \div 4$ | | |
| Q21 | 5×9 | | |
| Q22 | $4 + 8$ | | |
| Q23 | $11 - 7$ | | |
| Q24 | 6×9 | | |
| Q25 | $56 \div 8$ | | |
| Q26 | 7×5 | | |
| Q27 | $63 \div 9$ | | |
| Q28 | $8 + 8$ | | |
| Q29 | $12 - 8$ | | |
| Q30 | 7×6 | | |

Level 5 Test – Skills

Name

Mental Arithmetic Section 10 minutes Non-calculator

Each question is worth 1 mark. Only answers required. Scribbling paper allowed.

Score: /15

| | Question | Answer | Tick |
|-----|---|--------|------|
| Q1 | $558 + 492$ | | |
| Q2 | $1630 - 486$ | | |
| Q3 | 125×500 | | |
| Q4 | $0.34 \div 2000$ | | |
| Q5 | 76.2×5 | | |
| Q6 | $3\frac{5}{7} \times 140$ | | |
| Q7 | $12\frac{1}{2} \div 1\frac{3}{4}$ | | |
| Q8 | 0.31×0.05 | | |
| Q9 | $0.03 \div 150$ | | |
| Q10 | $(2^{29} - 2^{28}) \div 2^{27}$ | | |
| Q11 | 12.5×116 | | |
| Q12 | $2\frac{4}{5} - 1\frac{3}{4}$ | | |
| Q13 | $\sqrt[4]{8.1 \times 10^{17}}$ | | |
| Q14 | $\frac{41}{84} - \frac{5}{21}$ in simplest form | | |
| Q15 | $1 + 2 - 3 + 4 - \dots + 98 - 99$ | | |

Level 5 Test – Skills

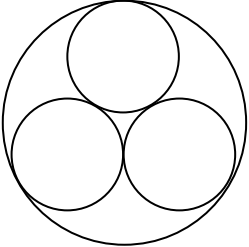
Name

Problem Solving Section 45 minutes Calculators allowed

Work on the paper provided. Show your working and explain your thinking. You will get credit for solving the problems and for your communication. Part solutions will get part of the marks.

Problem Solving Score: /25

Communication Score: /10

| | | |
|----|--|-----|
| Q1 | Rain drops are falling such that their height above the ground decreases by 4 m each second. The wind is blowing at 36 km/h. At what angle from the vertical are the rain drops coming down? | /5 |
| Q2 |  <p>The small circles are each 10 cm in diameter. Find the diameter of the large circle.</p> | /10 |
| Q3 | There are three equal-sized coins in a bag. One coin is heads on both sides and the others are heads on one side and tails on the other. One coin is selected from the bag without looking and placed on the table. If the top face is heads what is the probability that the bottom face is heads? You must explain your reasoning for full credit. | /10 |

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Investigating Section 1 week Calculators allowed

Work on the paper provided. Show your working and explain your thinking. You will get credit for what you find and for your communication.

Investigating Score: /25

Communication Score: /15 .

Below are two sequences of heads and tails. One is from tossing a coin; the other is made up.

HTTHHTHTHHHTHTTTTTHHTHTTTTHHTHTHHTTHTTTHTHTTTHHTTHTHTTTHHTHTHH
THTHTHTHHHTHTTHTHTHHHTHHHTTHTHTHTHHTHTTHTHHTTHTHTTTHHTTTTHHHHTHT

TTTTHTHTTTTTHHHHTHHHTHTHTHTHTHHTHTTTTHTTHTTHTHTTTHHHHTHTHTHH
THHTHTTTHHTTHTHTTTHTHHHHHHHHHHHTTTTTTHTHTHTHTHTHTHTTHTHTHT

It is possible to tell which is which.

Investigate.