

Foundation Mathematics
ANSWER KEY

Paper 1 (No Calculators)

Booklet A (30 marks)

Q1 - Q10 (1 mark each)

Q11-Q20 (2 marks each)

| | | | |
|-----|---|-----|---|
| Q1 | 4 | Q11 | 2 |
| Q2 | 2 | Q12 | 3 |
| Q3 | 1 | Q13 | 2 |
| Q4 | 1 | Q14 | 4 |
| Q5 | 3 | Q15 | 2 |
| Q6 | 3 | Q16 | 4 |
| Q7 | 1 | Q17 | 2 |
| Q8 | 2 | Q18 | 2 |
| Q9 | 2 | Q19 | 4 |
| Q10 | 3 | Q20 | 4 |

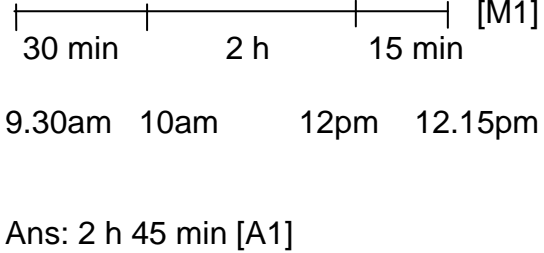
Booklet B (20 marks)

Q21 – Q30 (2 marks each)

| No. | Solution |
|------|---|
| Q21a | 3 007 [A1] |
| Q21b | 90 486 [A1] |
| Q22 | 0.8×2 [M1] = 1.60 [A1] |
| Q23 | $21 \times 6 \times 4$ [M1] = 504 [A1] |
| Q24 | 23×4 [M1] = 92 [A1] |
| Q25 | $47 + 14$ [M1] = 61 [A1] |
| Q26 | $400 - 149$ [M1] = 251 [A1] |
| Q27 | $180 - 90 = 90$ $90 - 30$ [M1] = 60° [A1] |
| Q28 | $15 - 12$ [M1] = 3 [A1] |
| Q29 | $15 + 10 + 12 + 3$ [M1] = 40 [A1] |
| Q30 | $\frac{2}{100} \times 1500$ [M1] = 30 [A1] |

Paper 2 (Calculators) 60 marks

(Q1-Q10 2 marks each)

| No. | Solution | Alternative ans/Remarks |
|-------|---|--|
| Q1(a) | Factors of 12: 1, 2, 3, 4, 6 and 12 [A1] | |
| Q1(b) | Factors of 15: 1, 3, 5 and 15 Common factors: 1 and 3 [A1] | |
| Q2 | $3941 \div 510 = 7.727$ [M1] $7.727 \sim 7.23$ [A1] | |
| Q3 | $\frac{2}{5} \times 60 = 24$ $60 - 24$ [M1] = 36 [A1] | $\frac{3}{5} \times 60$ [M1] = 36 [A1] |
| Q4 | $1 - \frac{1}{5} - \frac{7}{10}$ [M1] = $\frac{1}{10}$ [A1] | $\frac{1}{5} + \frac{7}{10} = \frac{9}{10}$ $1 - \frac{9}{10}$ [M1] = $\frac{1}{10}$ [A1] |
| Q5 | $5.6 \text{ m} \div 7 = 0.8 \text{ m}$ [M1] $0.8 \text{ m} = 80 \text{ cm}$ [A1] | M1 awarded only if quotient obtained is accurate. |
| Q6 | $\$5 - \$2.30 - \$1.60 = \1.10 $\$1.10 + \0.30 [M1] = $\$1.40$ [A1] | |
| Q7 |  <p>[M1]</p> <p>9.30am 10am 12pm 12.15pm</p> <p>Ans: 2 h 45 min [A1]</p> | Give M1 for any correct combination in timeline / working. |
| Q8 | $13 \times 11 \times 6$ [M1] = 858 [A1] | |
| Q9 | $180^\circ - 40^\circ = 140^\circ$ $140^\circ \div 2^\circ$ [M1] = 70° [A1] | |
| Q10 | $90^\circ - 35^\circ$ [M1] = 55° [A1] | |

(Q11-Q18 Marks depended on question)

| No. | Solution | Alternative ans/Remarks |
|--------|---|--|
| Q11 | $200 + 700 = 900$ $900 \div 2$ [M1] = 450 [A1] | |
| Q12(a) | $\frac{500}{4000} = \frac{1}{8}$ [A1] | |
| Q12(b) | $\$4000 - \$500 = \$3500$ $\frac{1}{5} \times \$3500$ [M1] = \$700 [A1] | |
| Q13(a) | $\frac{180}{600} \times 100$ [M1] = 30% [A1] | |
| Q13(b) | 40% of 600 = 240 $600 - 240 - 180 = 180$ $180 \div 6$ [M1] = 30 [A1] | |
| Q14(a) | $7 \text{ cm} \times 11 \text{ cm} = 77 \text{ cm}^2$ [A1] | |
| Q14(b) | $14 \text{ cm} \times 8 \text{ cm} = 112 \text{ cm}^2$ $112 \text{ cm}^2 - 77 \text{ cm}^2$ [M1] = 35 cm^2 [A1] | $7 \text{ cm} \times 3 \text{ cm} = 21 \text{ cm}^2$ $14 \text{ cm} \times 1 \text{ cm} = 14 \text{ cm}^2$ $21 \text{ cm}^2 + 14 \text{ cm}^2$ [M1] = 35 cm^2 [A1] or $8 \text{ cm} \times 3 \text{ cm} = 24 \text{ cm}^2$ $11 \text{ cm} \times 1 \text{ cm} = 11 \text{ cm}^2$ $24 \text{ cm}^2 + 11 \text{ cm}^2$ [M1] = 35 cm^2 [A1] |
| Q15(a) | $\angle WXZ = 360^\circ - 60^\circ - 148^\circ - 32^\circ$ [M1] = 120° [A1] | $180^\circ - 60^\circ$ [M1] = 120° [A1] or $180^\circ + 60^\circ = 240^\circ$ $360^\circ - 240^\circ$ [M1] = 120° [A1] or $148^\circ + 32^\circ + 60^\circ = 240^\circ$ $360^\circ - 240^\circ$ [M1] = 120° [A1] |
| Q15(b) | $\angle UXY = 180^\circ - 90^\circ - 58^\circ$ [M1] = 32° $180^\circ - 32^\circ$ [M1] = 148° [A1] | $90^\circ + 58^\circ = 148^\circ$ $180^\circ - 148^\circ$ [M1] = 32° $180^\circ - 32^\circ$ [M1] = 148° [A1] or $90^\circ - 58^\circ = 32^\circ$ $180^\circ - 32^\circ$ [M1] = 148° [A1] |
| Q16(a) | $50 \text{ cm} \times 30 \text{ cm} \times 11 \text{ cm} = 16\,500 \text{ cm}^3$ $29 \text{ cm} \times 22 \text{ cm} \times 10 \text{ cm} = 6380 \text{ cm}^3$ $16\,500 \text{ cm}^3 - 6380 \text{ cm}^3$ [M1] = 10 120 Ans: 10 120 cm^3 / ml / 10.12 ℓ [A1] | |

| | | |
|--------|---|--|
| Q16(b) | $30 \div 2 = 15$ $50 \times 15 \times 11$ [M1] = 8250 Ans: $8250 \text{ cm}^3 / \text{ml} / 8.25 \ell$ [A1] | $16\,500 \text{ cm}^3 \div 2$ [M1] = 8250 Ans: $8250 \text{ cm}^3 / \text{ml} / 8.25 \ell$ [A1] |
| Q17(a) | 80×3 [M1] = 240 [A1] | |
| Q17(b) | $210 \div 3$ [M1] = 70 $70 + 30$ [M1] = 100 [A1] | |
| Q18(a) | 0.2×2 [M1] = 0.4 $0.4 \times \$3500$ [M1] = \$1400 [A1] | |
| Q18(b) | $*\$3500 \div 4$ [M1] = \$875 $\$1400 \div 2 = \700 $\$3500 - \$1400 - \$875 - \700 [M1] = \$525 [A1] | <p>*In the event that this part of the working is missing, as long as in the subsequent part of working the child has \$875, child must be awarded that [M1].</p> $\$1400 + \$875 + \$700 = \2975 $\$3500 - \2975 [M1] = \$525 [A1] |