



MATHEMATICS

0580/12

Paper 1 (Core)

October/November 2017

MARK SCHEME

Maximum Mark: 56

Published

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Abbreviations

| | |
|-----|----------------------------|
| cao | correct answer only |
| dep | dependent |
| FT | follow through after error |
| isw | ignore subsequent working |
| oe | or equivalent |
| SC | Special Case |
| nfw | not from wrong working |
| soi | seen or implied |

| Question | Answer | Marks | Partial marks |
|----------|---|-------|--|
| 1 | 14 027 | 1 | |
| 2 | -3 | 1 | |
| 3 | 1 | 1 | |
| 4 | [0].00517 | 1 | |
| 5 | $\frac{31}{50}$, $\frac{5}{8}$, 0.63, 64% | 2 | B1 for 3 in correct order or M1 for 0.62 or 62% and 0.625 or 62.5% or 4 fractions with a common denominator |
| 6 | 10.1[0] | 2 | M1 for [4.5 +] ($7 \times [0].8$) or $450 + 7 \times 80$ |
| 7 | 2.1 | 2 | B1 for 2.08 or 2.079... or 2.10 |
| 8(a) | 2, 3, 4, 6 | 1 | |
| 8(b) | 27, 36 cao | 1 | |
| 9 | [x =] 60 [y =] 40 | 2 | B1 for each or for two numbers that add to 100 |
| 10 | 2.5 | 2 | M1 for 2200 or 0.055 seen or SC1 for answer figs 25 |
| 11 | 32 | 2 | M1 for $\frac{1}{2} \times 33 \times h = 528$ oe |
| 12(a) | Positive | 1 | |
| 12(b) | No correlation oe | 1 | |
| 13 | [0].35 | 2 | M1 for $1 - (0.15 + 0.3 + 0.2)$ |
| 14 | 361.5 | 1 | |
| | 362.5 | 1 | If zero scored, SC1 for both correct but reversed |

| Question | Answer | Marks | Partial marks |
|-----------|---|-----------|---|
| 15 | 52.2 or 52.19 to 52.20 | 2 | M1 for $\sin [\dots] \frac{6.4}{8.1}$ oe |
| 16(a) | (2, 5) | 1 | |
| 16(b) | Point plotted at (7, -2) | 1 | |
| 16(c) | Isosceles cao | 1 | |
| 17(a) | 9 | 1 | |
| 17(b) | Midpoint marked | 1 | |
| 17(c) | Perpendicular line drawn | 1 | |
| 18 | 120 nfw | 3 | M2 for $180 - \frac{360}{6}$ oe $\frac{180 \times (6-2)}{6}$ or M1 for $\frac{360}{6}$ soi by 60 or $180 \times (6-2)$ soi by 720 |
| 19 | Correct ruled net | 3 | B2 for 4 more correct faces in correct position or B1 for 2 or 3 more correct faces in correct position |
| 20(a) | $3\frac{2}{3}$ cao | 1 | |
| 20(b) | $\frac{3}{12}$ [and $\frac{5}{12}$] oe | M1 | For correct method to find common denominator e.g. $\frac{12}{48}$ and $\frac{20}{48}$ |
| | $\frac{2}{3}$ cao | A1 | |
| 21 | [y =] $0.5x + 2$ oe | 3 | M2 for [y =] $0.5x + c$ oe $c \neq 2$ or M1 for $\frac{\text{rise}}{\text{run}}$ and B1 for $kx + 2, k \neq 0$ |
| 22(a)(i) | 36 | 1 | |
| 22(a)(ii) | Add 7 oe | 1 | |
| 22(b) | $4n - 2$ oe | 2 | M1 for $4n + k, k \neq -2$ oe |
| 23(a) | $\frac{5}{14}$ or 0.357 or 0.357... | 2 | M1 for $7 - 2 = 11n + 3n$ oe or better |
| 23(b) | 18 | 2 | M1 for $p - 3 = 3 \times 5$ or $\frac{p}{5} = 3 + \frac{3}{5}$ |

| Question | Answer | Marks | Partial marks |
|----------|--------|-------|--|
| 24(a) | 6 | 2 | M1 for $\frac{15}{12.5}$ or $\frac{12.5}{15}$ or $\frac{12.5}{5}$ or $\frac{5}{12.5}$ soi |
| 24(b) | 10 | 2 | M1 for $\frac{12.5}{15} \times 12$ or $12 \div \frac{15}{12}$ soi |