**Practice Paper 1 Marking scheme**

| Q | | **Working** | **Answer** | | **Mark** | **Notes** | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | (a) |  | | 38,45 | 2 | B2 | B1 for 38 shown as sixth term  B1 for 45 shown as seventh term  ft from their "38" + 7 |
|  | (b) |  | | added 7 | 1 | B1 | for correct explanation  E.g. +7, 7 more, jumped forward by 7 oe  **or** 7*n* 4 |
|  | (c) | 3 + 17 × 7 or 7 × 18 4 or 7*n* 4 **or**  3, 10, 17, 24, 31, 38, 45, 52, 59, 66, 73, 80, 87, 94, 101, 108, 115, 122  **or** E.g. 45 + 11 × 7 | |  |  | M1 | NB: If a list is given then must show a clear intention of adding 7 with at least 4 terms after 45  (condone 1 arithmetic error)  E.g. 45, 52, 59, 66, 73  E.g. 38, 45, 52, 59, 66, 73 |
|  |  |  | | 122 | 2 | A1 | SC : B1 for answer of 115 or 129 |
|  | (d) |  | | 234 | 1 | B1 |  |
|  |  |  | |  |  |  | **Total 6 marks** |

| 4 | (a) |  | Yellowknife | 1 | B1 |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (b) | 25 5 **or** 25 + 5 **or** 5 25 |  |  | M1 | working may be seen on a number line |
|  |  |  | 30 | 2 | A1 | accept 30 |
|  | (c) | 11 6 |  |  | M1 | or for an answer of 17  working may be seen on a number line |
|  |  |  | 17 | 2 | A1 |  |
|  |  |  |  |  |  | **Total 5 marks** |

| 6 | (a) |  | 2 triangles shaded | 1 | B1 | | |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (b) |  | 0.4 | 1 | B1 | | | |
|  | (c) | 6 × 3.2 3 × 4 oe |  |  | M1 | for a correct substitution **or**  for 19.2 and (−)12 **or**  an answer of 7.2 | | |
|  |  |  | 31.2 | 2 | A1 |  | | |
|  |  |  |  |  |  | | **Total 4 marks** | |

| 7 | i |  | 30 | 1 | B1 |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ii |  | 32 | 1 | B1 |  |
|  | iii |  | 31 or 37 | 1 | B1 | for 31 **or** 37 **or** both |
|  |  |  |  |  |  | **Total 3 marks** |

| 8 | (a)(i) |  | radius | 1 | B1 |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (a)(ii) |  | 28 | 1 | B1 | accept 26 30 |
|  | (b)(i) |  | 30 | 1 | B1 |  |
|  | (b)(ii) |  | angles on a straight line add to 180 | 1 | B1 | dep on B1 in (bi)  **or** angles at a point add to 360o (and vertically opposite angles are equal) |
|  | (c)(i) |  | 150 | 1 | B1 |  |
|  | (c)(ii) |  | corresponding angles are equal | 1 | B1 | dep on B1 in (ci) |
|  |  |  |  |  |  | **Total 6 marks** |

| 9 | (a) |  | 3*x*² | 1 | B1 |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (b) |  |  |  | M1 | for 2*e* or 9*f* |
|  |  |  | 2*e* + 9*f* oe | 2 | A1 |  |
|  | (c) |  | 8*ab* | 1 | B1 |  |
|  | (d) |  | 48 | 1 | B1 |  |
|  | (e) | E.g.5*y* = 14 2 or 5*y* = 2 14 or |  |  | M1 | for a correct first step |
|  |  |  | oe | 2 | A1 | for oe E.g. or 2.4 |
|  |  |  |  |  |  | **Total 7 marks** |

| 11 | (a) |  | 5(2*a* + 5) | 1 | B1 |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (b) |  | *w*(7*w* 4) | 1 | B1 |  |
|  | (c) |  |  |  | M1 | for *p*³ or (−)5*p*² |
|  |  |  | *p*³ 5*p*² | 2 | A1 |  |
|  | (d) | *x*² + 7*x* − 3*x* − 21 |  |  | M1 | for 3 correct terms **or**  4 correct terms ignoring signs **or**  *x*² + 4*x* + c **or**  .... + 4*x* 21 |
|  |  |  | *x*² + 4*x* 21 | 2 | A1 |  |
|  |  |  |  |  |  | **Total 6 marks** |

| 12 | (a) |  | Vertices at (5, 3) (5, 9)(3, 9) (3, 5) (1, 5) (1, 3) | 2 | B2 | If not B2 then award  B1 for shape of correct size and orientation in incorrect position **or** 4 out of 6 vertices correct |
| --- | --- | --- | --- | --- | --- | --- |
|  | (b) |  | Vertices at (7, 1) (7, 3)(4, 3) (4,2) (6, 2) (6,1 ) | 2 | B2 | If not B2 then award  B1 for correct orientation but incorrect position or  B1 for rotation 90clockwise about (7, 3) |
|  |  |  |  |  |  | **Total 4 marks** |

| 14 | (a) |  | 3 < *L* ≤ 4 | 1 | B1 | Accept 3 4 |
| --- | --- | --- | --- | --- | --- | --- |
|  | (b) | Eg 0.5 4 + 1.5×5 + 2.5×11 + 3.5×14 + 4.5×6or 2 + 7.5 + 27.5 + 49 + 27or 113 |  |  | M2 | *f* × *d* for at least 4 products with correct mid- interval values **and** intention to add.  If not M2 then award M1 for  *d* used consistently for at least 4 products within interval (including end points) **and** intention to add  **or**  for at least 4 correct products with correct mid-interval values with no intention to add |
|  |  | (0.5 × 4 + 1.5 × 5 + 2.5 × 11 + 3.5 × 14 + 4.5 × 6) ÷ 40 or 113 ÷ 40 |  |  | M1 | dep on M1 (ft their products)  NB: accept their 40 if addition of frequencies is shown |
|  |  |  | 2.8 | 4 | A1 | Allow 2.82, 2.83 or 2.825 |
|  |  |  |  |  |  | **Total 5 marks** |

| 19 |  | cos22 = or or oe **or** |  |  | M1 |  | M1 for  *BC* = 14.9 × tan22 oe (= 6.019 – 6.02)  **AND**  (*AC*2 = ) 14.92 + 6.019…2 |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | (*AC* = ) or( × sin 90) |  |  | M1 |  | M1 for (*AC* ) = |
|  |  |  | 16.1 | 3 | A1 | Accept 16.07 − 16.1 | |
|  |  |  |  |  |  | **Total 3 marks** | |

| 20 | (a) | 668.8 640 or 28.8 |  |  | M1 |  | M2 for  **or**  1.045 **or** 104.5 |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | "28.8" ÷ 640 (×100) or 0.045 |  |  | M1 | dep |
|  |  |  | 4.5 | 3 | A1 |  |  |
|  | (b) | oe or oe |  |  | M2 | for a complete method  If not M2 then award M1 for  (=7.04) **or**  0.95*x* = 668.8 oe | |
|  |  |  | 704 | 3 | A1 |  | |
|  |  |  |  |  |  | **Total 6 marks** | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Question** | | **Working** | **Answer** | **Mark** | **AO** | **Notes** | |
| **23** | **a** |  | 140 000 | 1 | AO1 | B1 |  |
|  | **b** |  | Mars | 1 | AO1 | B1 |  |
|  | **c** | 1.2 × 105 – 5 × 104 **or** |  |  | AO1 | M1 |  |
|  |  | 120 000 – 50 000 **or** 70 000 oe |  |  |  |  |  |
|  |  |  | 7 × 104 | 2 |  | A1 |  |

| **24** |  | 7500 × 0.04 or 300 or 7500 × 1.04 or 7800 or 7500 × (*n* > 1 )  Eg 7500 +⨯7500 + ⨯(7500 + “300”)  +⨯(7500 + “300” + “312”) or  7500 + “300” + “312” + “324.48” | 8436.48 | 3 | M1  M1 | For interest for first year or for 7500 × 0.04 × 3 oe or 900 or  for 7500 + 7500 × 0.04 × 3 oe or an answer of 8400  For a complete method | M2 for 7500⨯ 1.043 oe |
| --- | --- | --- | --- | --- | --- | --- | --- |
| A1 | Accept answers in the range 8436 – 8437  NB: Answer in the range 936 -937 gets M2A0 | |
|  |  |  |  |  |  | **Total 3 marks** | |