**Year 11 to Year 12 Transition Paper**

**Algebraic Methods**

**Mark Scheme**

| **Question** | **Working** | **Answer** | **Mark** | **Notes** |
| --- | --- | --- | --- | --- |
| **1** |  |  | 2 | M1 for (*x*− 1)(*x*+ 8)  A1cao |
| **2** |  |  | 3 | M1 for using a correct common denominator,  eg  M1 for oe  A1 for or |
| **3** |  |  | 3 | M1 for using a correct common denominator  A1 for  A1 for or |
| **4** |  |  | 2 | M1 for or  for = (  A1 for or |
| **5** |  |  | 3 | B1 for  B1for  B1 cao |
| **6** |  |  | 2 | M1 for factorisation of  A1 |
| **7** |  |  | 3 | M1 for using a correct common denominator  A1 oe  A1 or or  or |
| **8** |  |  | 3 | M1 for complete factorisation or multiplying and inverting second fraction  M1 for complete factorisation **AND**  multiplying and inverting second fraction  A1 for or 1 − |
| **9** |  |  | 3 | M1 for using as the common denominator  M1 (dep M1) for a complete method to simplify to a single fraction  A1 or |
| **10** |  |  | 2 | M1 for a correct factorisation of denominator into linear factors,  or 2 or  A1 for |
| **11** |  |  | 4 | M1 for correct factorisation of *x*2 – *y*2,  e.g. (*x* – *y*)(*x* + *y*)  M1 for finding a common denominator,  e.g. 5(*x* – *y*)(*x* + *y*) or (5*x* + 5*y*)(*x*2 – *y*2)  M1 (dep M1) for correct method to combine fractions  A1 for or or  or or |
| **12** |  |  | 3 | M1 for correct method to combine the fractions  M1(dep) for full simplification of the numerator  A1 for  or  or  or |
| **13** |  |  | 2 | M1 for factorisation of numerator or denominator  A1 for |
| **14** | ÷  × | − | 4 | M1 for factorisation of one term  M1 for factorisation of both numerators and both denominators  M1 for multiplying by the reciprocal of the second fraction  A1 cao |
| **15** |  |  | 3 | M1 Takes a common factor of *x* out of the denominator and writes the numerator in factors.  dM1 Further factorises the denominator and cancels  A1 Shows that with no errors or omissions |