**How to get marks for Integration by Substitution questions**

1. Correct integral all in terms of u (i.e. no *x*’s) and including the *du*
2. Correct simplification of the integral, ready for integrating
3. Correct integration
4. Correct conversion of limits or re-substitution for *x*’s
5. Correct final answer in required format

(Note that there may be more marks available if question is more complicated)

**How to get marks for Integration by Substitution Questions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Question & substitution |  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |  |
| Correct integral all in terms of u (i.e. no *x*’s) and including the *du* |  |  |  |  |  |
| Correct simplification of the integral, ready for integrating |  |  |  |  |  |
| Correct integration |  |  |  |  |  |
| Correct conversion of limits orre-substitution for *x*’s |  |  |  |  |  |
| Correct final answerin required format |  |  |  |  |  |
| Exam Paper Ref. | AQA Jan 2010 | AQA Jan 2011 | AQA Jan 2012 | AQA June 2012 | AQA June 2013 |

**How to get marks for Integration by Substitution Questions - Answers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Question & substitution |  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |  |
| Correct integral all in terms of u (i.e. no *x*’s) and including the *du* |  |  |  |  |  |
| Correct simplification of the integral, ready for integrating |  |  |  |  |  |
| Correct integration |  |  |  |  |  |
| Correct conversion of limits orre-substitution for *x*’s |

|  |  |
| --- | --- |
| *x* | *u* |
| 3 | 5 |
| 1 | 1 |

 |

|  |  |
| --- | --- |
| *x* | *u* |
| 1 | 4 |
| 0 | 1 |

 |

|  |  |
| --- | --- |
|  | *x* |
| 2 |  |
|  |  |

 |

|  |  |
| --- | --- |
| *x* | *U* |
| 1 | 3 |
| 0 | 2 |

 |

|  |  |
| --- | --- |
| *x* | *u* |
| 4 | 2 |
| 1 | 1 |

 |
| Correct final answerin required format |  |  |  |  |  |
| Exam Paper Ref. | AQA Jan 2010 | AQA Jan 2011 | AQA Jan 2012 | AQA June 2012 | AQA June 2013 |