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|  | **YEAR 12 MATHEMATICS SPECIALIST**  **SEMESTER TWO 2017**  **QUESTIONS OF REVIEW 6: Integration** |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wednesday 9th August Time: 30 minutes Mark /24

Calculator free.

### [5 marks – 1, 2 and 2]

#### Simplify

#### Express in the partial fraction form

#### Determine

#### 

### [10 marks – 1, 3, 3 and 3]

#### Simplify by inspection

#### Use the substitution to evaluate

#### Evaluate by using the substitution

#### Evaluate

### [5 marks – 1, 1, 1 and 2]

#### Draw a quick sketch of

#### Describe the quantity represented by each of the integrals:

#### 

#### 

#### 

#### 

### [4 marks]

### What is the volume generated when the curve , for , is revolved through 360° about the *y* axis?