Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Marks: \_\_\_\_\_\_/68

Teacher’s Name:(Circle your teacher) Satendra / Beata / Kirtana



## Wyndham College

**Mathematics Department**

**ASSESSMENT TASK 1**

**Topic Review**

**Year 11 2021**

**MATHEMATICS ADVANCED**

*Assessment Date: Term 1 Week 8*

*Thursday 18th March*

*Assessment Value: 30%*

**Instructions**:

* Working time: 1 hour minutes plus 10 minutes reading
* Write using blue or black pen
* Show all necessary working
* Marks may be deducted for careless or

 badly arranged work

* Approved calculators may be used
* Multiple choice questions to be answered

on the examination paper by circling the

best alternative of your choice.

* Start each question on a new booklet.
* Clearly label each booklet with the question number, your name and your teacher’s name

 (Even if you don’t attempt the question)

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| --- | --- |
| **Question** | **Marks** |
| **Question 1****Indices** |  **/12** |
| **Question 2****Algebra** |  **/19** |
| **Question 3** **Surds** | **/8** |
| **Question 3****Equations** | **/26** |
|  **Total** |  **/68** |

**Outcomes assessed:**

* **MA11-1**
uses algebraic and graphical techniques to solve,

 and where appropriate, compare

alternative solutions to problems

**Question 1 Indices Marks**

1. Simplify
2. 1 Mark

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1. 1 Mark

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1. Write in index form with no indices in the denominator.
2. 1 Mark

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1. 1 Mark

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1. Write without indices. 2 Marks

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1. Solve = 2 Marks

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 e) Solve = 2 Marks

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1. Solve = 2 Marks

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**Question 2 (Take a new page and write your name, the question number and your teacher’s name.)**

**Algebra**

1. Expand and simplify
2. (4x – 3)2 2 Marks

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1. (3x – 4) (3x +4) 2 Marks

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1. Factorise
2. x3 – 4x2 – x + 4 2 Marks

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1. 4y2 + 4y – 3 2 Marks

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1. 9a2 + 12a + 4 2 Marks

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1. 4a2 – 81b2 2 Marks

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1. (x + 2)2 – (2y + 1)2 2 Marks

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1. Simplify
2. ̶ 2 Marks

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1. ÷ x 3 Marks

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**Question 3(Take a new page and write your name, the question number and your teacher’s name.)**

**Surds**

1. Rationalise the denominator 2 Marks

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1. Find a and b if = a + b 2 Marks

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1. Find *n* if + = 2 Marks

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1. (3√7 - √2)2 2 Marks

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**Equations**

1. i The radius r of a sphere with volume V is given by the formula *r* = .

What is the volume of a sphere of radius 4 cm? Answer correct to 2 decimal places. 2 Marks

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 ̶ = 9 2 Marks

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iii 4 – (x – 1) ≤ 7 2 Marks

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iv = 5 2 Marks

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v – 1 = 0 2 Marks

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vi 5x – x2 = 0 2 Marks

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viii (x + 3)2 = 11 2 Marks

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ix x2 – 5x – 6 = 0 2 Marks

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e) Solve by completing the square x2 – 10x – 3 = 0 2 Marks

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f) Solve by using the quadratic formula 3x2 – 8x + 2 = 0 2 Marks

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g) Solve the simultaneous equations (a) 3a – 2b = ̶ 6

 a – 3b = ̶ 2 3 Marks

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 (b) y = x2

 2x + y = 0 3 Marks

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***End of paper***