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| C:\Users\David\Dropbox\rossmoyne.png | **MATHEMATICS METHODS : UNITS 1 & 2, 2020**  Test 3 –Trigonometric, Probability, Counting, Exponentials (10%) (1.2.10 to 1.2.16, 1.3.6 to 1.3.17, 2.1.1 to 2.1.7)  Calculator Free - Allow 1 Minute of Reading Time | | |
| **Time Allowed**  **20 Minutes** | | **First Name Surname** | **Marks 22 marks** |

**Circle your Teacher’s Name:** Bestall Goh Fraser-Jones Freer Koulianos Luzuk Rudland Tanday

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| **Assessment Conditions: *(N.B. Sufficient working out must be shown to gain full marks)***   |  | | --- | | * Calculators: Not Allowed * Formula Sheet: Provided * Notes: Not Allowed | |

1. **(3 marks)**

Expand leaving your answer in simplified form.

1. **(4 marks)**

Solve for .

1. **(3 marks)**

Simplify the following expression.

1. **(3, 2, 3 = 8 marks)**

Solve and proof the follow trigonometric functions.

* 1. Given the and are obtuse with  and , determine .
  2. Show that
  3. Solve

1. **(2, 2 = 4 marks)**



The exponential function above is a translation of .

* 1. Determine the equation for the function.
  2. Graph the function and estimate where the two functions intersect.