****Mathematical Association of Tasmania  **2018 MAT Problem Solving Competition**



Principal Keith Wenn, Sophie Burgess (Senior Division, 1st Place, 2017) and Molly Deng (Senior Division, 3rd Place, 2017)

**Thursday 22nd March 2018**

|  |  |
| --- | --- |
| **DIVISIONS** | **PRIZES** |
| **Primary** | Years 5 – 6 | **1st Place** | $100 |
| **Junior Secondary** | Years 7 - 8 | **2nd Place** | $60 |
| **Upper Secondary** | Years 9 - 10 | **3rd Place** | $40 |
| **Senior Secondary** | Years 11 - 12 |  |

**Participation Certificates for all students**

We recognise high-achieving Years 5, 7, 9 and 11 students as they compete against older students

|  |
| --- |
| **Example Question****a)** Write down the first ten prime numbers.**b)** I picked two different prime numbers and multiplied them together. My answer  was 51. What were my numbers?**c)** How many numbers below 51 do **not** share a factor with 51? (For example: 15 and  35 share a factor as they both divide by 5, while 16 and 35 do not share a factor.)**d)**  Pick two different prime numbers and multiply them together. How many  numbers less than your total do **not** share a factor with your total? Repeat.**e)** I pick two more prime numbers: 3301 and 1030201. I multiply them together.  How many numbers less than my total do **not** share a factor with the total? |

Entry forms and payment are due by

**Friday 15th March 2018**