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|  | | **2018**  PRELIMINARY YEARLY EXAMINATION |
| Mathematics Standard | | |
| **General Instructions** | * Working time – 2 hours * Write using black pen * Approved calculators may be used * A reference sheet is provided at the back of this paper * Show ALL relevant mathematical reasoning and/or calculations | |
| Student Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |

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|  | **Earning Money** | **Measurement** | **Formulae & Equations** | **Classifying & Representing Data** | **Measurement & Energy** | **Relative Frequency & Probability** | **Linear Relationships** | **Interest & Depreciation** | **Exploring & Describing Data** | **Working with Time** | **TOTAL** |
| **Multiple Choice** | /1 |  | /1 | /3 | /2 |  | /1 | /2 |  |  | /10 |
| **Q11** |  |  | /4 |  |  |  |  |  |  |  | /4 |
| **Q12** |  | /2 |  |  |  |  |  |  |  |  | /2 |
| **Q13** |  |  |  | /2 |  |  |  |  |  |  | /2 |
| **Q14** |  |  | /4 |  |  |  |  |  |  |  | /4 |
| **Q15** |  |  |  |  |  |  |  | /3 |  |  | /3 |
| **Q16** |  | /4 |  |  |  |  |  |  |  |  | /4 |
| **Q17** |  |  |  |  |  | /8 |  |  |  |  | /8 |
| **Q18** |  |  | /4 |  |  |  |  |  |  |  | /4 |
| **Q19** |  |  |  | /3 |  |  |  |  |  |  | /3 |
| **Q20** |  |  |  |  | /2 |  |  |  |  |  | /2 |
| **Q21** |  |  |  |  |  |  | /3 |  |  |  | /3 |
| **Q22** | /6 |  |  |  |  |  |  |  |  |  | /6 |
| **Q23** |  |  | /3 |  |  |  |  |  | /3 |  | /6 |
| **Q24** |  |  |  |  |  | /2 |  |  |  | /3 | /5 |
| **Q25** |  | /4 |  |  |  |  |  |  |  |  | /4 |
| **Q26** |  |  |  |  |  |  |  |  | /4 |  | /4 |
| **Q27** |  |  |  |  |  |  | /4 |  |  |  | /4 |
| **Q28** |  | /3 |  |  |  |  |  |  |  |  | /3 |
| **Q29** |  |  |  |  |  |  |  | /6 |  |  | /6 |
| **TOTAL** | /7 | /13 | /16 | /8 | /4 | /10 | /8 | /11 | /7 | /3 | /87 |

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| Section I **10 marks**  **Attempt Questions 1 – 10.**  **Allow about 20 minutes for this section.** | |
| Use the multiple-choice answer sheet for Questions 1 – 10. | |
|  | A sample of 14 people were asked to indicate the time (in hours) they had spent watching television on the previous night. The results are displayed in the dot plot below.    What is the mean and sample standard deviation of these times? Answer correct to one decimal place.  (A) and  (B) and  (C) and  (D) and |
|  | A real estate agent is paid $500 a week plus a 6.5% commission on sales exceeding $650 000. What commission is made by the agent who sells a property for $775 000?  (A) $8125  (B) $8625  (C) $42 250  (D) $50 375 |
|  | The length of a dragonfly is measured to be metres.  What measurement is equivalent to this?  (A) 0.49 mm  (B) 4.9 mm  (C) 4.9 cm  (D) 49 cm |
|  | In order to test the reliability of light globes produce in a factory, a quality control engineer would most likely use which of the following samples?  (A) Random  (B) Stratified  (C) Systematic  (D) Self-selected |
|  | The table below was published by a health club to give its members an idea of the benefits of various exercise activities.   |  |  |  |  | | --- | --- | --- | --- | | Mass  Activity | Kilojoules Burned per Hour by  Participants of Various Masses | | | | 60 kg | 80 kg | 100 kg | | Walking– Moderate Intensity | 903 kJ | 1204 kJ | 1505 kJ | | Walking– High Intensity | 1204 kJ | 1605 kJ | 2006 kJ | | Cycling – Moderate Intensity | 2104 kJ | 2809 kJ | 3511 kJ | | Cycling – High Intensity | 2709 kJ | 3612 kJ | 4514 kJ | | Swimming– Moderate Intensity | 2257 kJ | 3010 kJ | 3762 kJ | | Swimming– High Intensity | 3008 kJ | 4012 kJ | 5014 kJ |   Amanda (mass 60 kg) walks at a moderate intensity for two hours while Georgia (mass 80 kg) swims at a high intensity for 30 minutes.  Which statement is true?    (A) Amanda burned 600 more kilojoules than Georgia.  (B) Amanda burned 200 more kilojoules than Georgia.  (C) Georgia burned 200 more kilojoules than Amanda.  (D) Georgia burned 600 more kilojoules than Amanda. |
|  | A landscaper quoted $300, excluding GST to complete a job. A GST of 10% is added to the price. What is the full price for the job?  (A) $30  (B) $303  (C) $310  (D) $330 |
|  | In each of the following a website asks for two data entries.  Which website is asking you to enter two continuous numerical variables?  (A) A health site asks for your weight and height.  (B) A shopping site asks for your shoe size and shirt size.  (C) A social media site asks for your eye colour and age.  (D) A social services site asks for your age and number of children. |
|  | The Louvre Pyramid in Paris has a square base with side length 35 m, a perpendicular  height of 22 m and a slant height of 28m.  What is the surface area of the pyramid?  (A)  (B)  (C)  (D) |

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|  | The frequency of an event is 6 and the total number of frequencies is 20. What is the relative frequency?  (A) 14%  (B) 26%  (C) 30%  (D) 70% |
|  | Oliver bought a vintage car for $12 500 and spent $7 500 on making improvements to it.  He then sold it for $32 500.  What percentage profit did he make, based on his total costs?  (A) 38.5%  (B) 60%  (C) 62.5%  (D) 100% |

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| **Question 11** | | |
| (a) | Simplify:  ……………………..……………………………………………………………………………………………………………… | **1** |
| (b) | Solve the following equations: |  |
|  | (i)  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** |
|  | (ii)  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |

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| **Question 12**  Morgan uses a tape measure and records the width of a black rectangle to be 11.5 cm.  The diagram below shows a closeup of the tape measure and the rectangle. | | | |
| (a) | What is the absolute error in using this tape measure?  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** | |
| (b) | What is the percentage error in finding the width of the black rectangle (correct to one decimal place)?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** | |
| **Question 13**  The Pareto Chart below was constructed to analyse the complaints received by a phone and online clothing retailer. | | | |
| (a) | If the retailer wanted to address the issues which caused 75% of the complaints, which areas should they address first?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (b) | If they only addressed errors in orders, what percentage of complaints would be addressed? Give your answer to the nearest whole number.  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** |

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| **Question 14** | | |
| (a) | Paul uses Young’s formula to calculate a six-year-old child’s dose of Gerintol.    Young’s Formula :  Given the adult dosage of Gerintol is 24 mL, what is the child’s dose?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |
| (b) | Ryan is driving at a speed of 60 km/h and sees a fallen tree branch on the road 80 metres ahead. His reaction time is 3 seconds before he applies the car’s brakes. The formula for stopping distance is:  How far is Ryan from the tree branch? Answer correct to the nearest whole metre.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **2** |

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| **Question 15**  A company bought a new copier for $25 400.  The copier loses 16% of its value in the first year and continues to depreciate using the straight-line method. | | |
| (a) | Find the amount of depreciation.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (b) | The copier will be replaced when its value falls below $10 000.  How many years will the copier be retained?  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **2** |

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| **Question 16**  The diagram shows a swimming pool design consisting of a semicircle and right triangle. The length of the pool is 15 m and one of the straight sides is 9 m. | | |
| (a) | Find the length of the straight side marked .  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (b) | Find the perimeter of the swimming pool. Give your answer correct to 3 significant figures.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **3** |

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| **Question 17** | | | | | |
| (a) | Jessica randomly chooses one chess piece from a bag which contains the following pieces: | | | |  |
|  | * 1 king. * 1 queen. | | * 2 rooks. * 2 bishops. | * 2 knights. * 4 pawns. |  |
|  | What is the probability that she doesn’t choose a pawn?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | | | | **1** |
| (b) | A box contains 29 coloured balls. There are 11 red balls and 18 green balls. 2 balls are selected from the box at random. | | | |  |
|  | (i) | Complete the probability tree diagram. | | | **2** |
|  | (ii) | Calculate the probability of selecting 2 red balls.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | | | **1** |
|  | (iii) | Calculate the probability of selecting at least 1 red ball.  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | | | **1** |

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| (c) | A company has a board of directors which has seven members whose surnames are Archer, Browne, Carlisle, Durie, Evans, Falconer and Green. | |  |
|  | (i) | The members of the board are asked to stand in a line to have a photograph taken.  In how many different orders could the board members stand in line?  ……………………..……………………………………………………………………………………………………………… | **1** |
|  | (ii) | All of the board members want to attend a conference, but only two can go.  The names of all members are placed in a hat and two are drawn out at random.  What is the probability that Browne and Green are chosen to attend?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **2** |

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| **Question 18**  Kate shares a bottle of wine over a dinner which lasts 2 hours. Kate weighs 70 kg.    The formula for calculating BAC is given as | | |
| (a) | Kate has three standard drinks from the bottle of wine.  Calculate her *BAC* at the end of this dinner. Give your answer correct to 2 decimal places.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |
| (b) | To estimate how long it takes for the *BAC* to return to zero after the last drink, you can divide the *BAC* by 0.015.  How long after she finishes drinking, would Kate’s *BAC* return to zero? Give your answer in hours and minutes.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |

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| **Question 19**  A cumulative frequency histogram is shown below. | | |
| (a) | What is the modal score?  ……………………..……………………………………………………………………………………………………………… | **1** |
| (b) | Draw the ogive on the graph above | **1** |
| (c) | What is the median score?  ……………………..……………………………………………………………………………………………………………… | **1** |

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| **Question 20**  Harrison uses a 600 W heater for a total of 25 hours during the week. What is the cost of using the heater for a week if electricity is $0.2248 per kWh? | | | |
| ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | | | **2** |
| **Question 21**  The amount of fuel used by an engine varies directly with the time that the engine has been running.  Using *t* for the running time and *A* for the amount of fuel used, this can be written as the equation , where *k* is a constant. | | | |
| (a) | When the engine runs for 2.5 hours it uses 16 litres of fuel.  Find the value of *k*.  ……………………..……………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………… | **2** | |
| (b) | On one day the engine had been running for 7 hours.  Calculate the amount of fuel that it used.  ……………………..……………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………… | **1** | |

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| **Question 22** | | | |
| Samuel is a casual employee at a local store and is paid at the following rates:   |  |  | | --- | --- | | Weekday rate | $18 per hour | | Saturday rate | Time-and-a-half |   The table below shows Samuel’s timesheet for last week.   |  |  |  |  | | --- | --- | --- | --- | |  | Start | Finish | Unpaid break | | Friday | 7:00 am | 2:30 pm | 30 minutes | | Saturday | 9:00 am | 5:00 pm | 1 hour | | | |  |
| (a) | Calculate Samuel’s gross pay for last week.  ……………………..……………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………… | | **2** |
| (b) | Samuel’s employer withholds 20% of his weekly earnings as PAYE tax. Calculate Samuel’s PAYE tax for last week.  ……………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………… | | **1** |
| Samuel earned a gross income of $63 000 this year. He has allowable deductions of $4500 and work related expenses of $1100. Use the table below to answer the following questions.     |  |  | | --- | --- | | Taxable income | Tax payable | | 0 – $18 200 | Nil | | $18 201 – $37 000 | Nil + 19 cents for each $1 over $18 200 | | $37 001 – $87 000 | $3572 + 32.5 cents for each $1 over $37 000 | | $87 001 – $180 000 | $19 822 + 37 cents for each $1 over $87 000 | | $180 001 and over | $54 232 + 45 cents for each $1 over $180 000 | | | |  |
| (c) | | What was Samuel’s taxable income?  ……………………..……………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………… | **1** |
| (d) | | Calculate the amount of tax payable.  ……………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………… | **2** |

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| **Question 23** | | | |
| (a) | The number of students absent from year 11 for the past nine days was as follows:  19, 20, 15, 14, 31, 17, 20, 16, 22 | |  |
|  | (i) | Calculate the interquartile range  ………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** |
|  | (ii) | Is 31 an outlier for this set of data?  Justify your answer with calculations.  ………………………………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |
| (b) | A plane travelled non-stop from London to Sydney, a distance of 17 850 km, in 20 h and 9 min. The plane started with 184 tonnes of fuel, and on landing had enough fuel in reserve to fly another 55 minutes. | |  |
|  | (i) | What was the plane’s average speed in kilometres per hour?  ………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** |
|  | (ii) | How much fuel was used, to the nearest tonne?  ………………………………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |

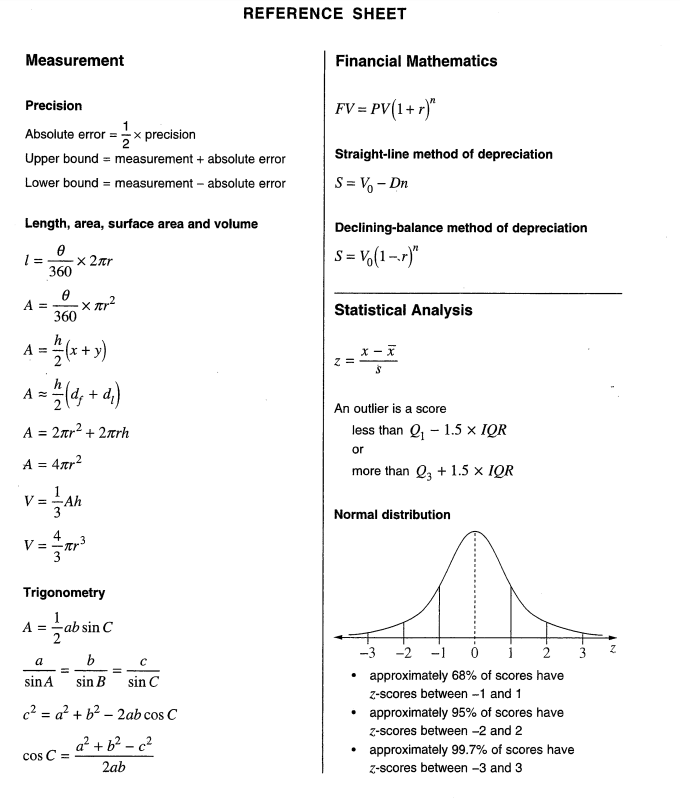
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| **Question 24** | | | | | |
| (a) | Approximately of Australia’s population have negative blood.  of these people regularly donate blood.  At a medical clinic where people donated blood on a particular day, how many of these people would be expected to have negative blood?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | | | | **2** |
| (b) | Part of a timetable for the Blue Mountains train line is shown below. | | | |  |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Station** | **pm** | **pm** | **pm** | **pm** | **pm** | | Katoomba | 8:15 | 9:09 | 10:15 | 10:29 | 11:29 | | Leura | 8:25 | 9:19 | -- | 10:39 | 11:39 | | Wentworth Falls | 8:33 | 9:27 | -- | 10:47 | 11:47 | | Lawson | 8:45 | 9:39 | -- | 10:59 | 11:59 | | Hazelbrook | 8:52 | 9:46 | -- | 11:06 | 12:06 | | Woodford | 8:59 | 9:53 | -- | 11:13 | 12:13 | | Linden | 8:04 | -- | -- | 11:18 | -- | | Faulconbridge | 9:10 | 10:00 | -- | 11:22 | 12:20 | | Springwood | 9:15 | 10:05 | 11:00 | 11:28 | 12:25 | | Valley Heights | 9:21 | 10:11 | -- | -- | 12:31 | | Blaxland | 9:27 | 10:18 | -- | 11:37 | 12:37 | | Glenbrook | 9:33 | 11:23 | -- | 11:43 | 12:43 | | Lapstone | 9:40 | 11:30 | -- | 11:50 | 12:50 | | Emu Plains | 9:47 | 10:38 | -- | 11:57 | 12:57 | | Penrith | 9:55 | 10:45 | 11:25 | 12:05 | 01:05 | | | | | | |
|  | | (i) | Jim wants to catch a train at Springwood to get to Penrith before 11:15 pm.  What is the latest time he can catch his train?  ……………………..……………………………………………………………………………………………………………… | **1** | |
|  | | (ii) | The express train from Katoomba leaves at 10:15pm and arrives at Penrith at 11:25. How much shorter is this trip compared to the all stations train?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **2** | |
| **Question 25**  A cone is placed inside a cylinder of exactly the same diameter and height. | | | | | |
|  | | (i) | Show that the volume of the cylinder is .  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** | |
|  | | (ii) | Write a similar expression for the volume of the cone.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** | |
|  | | (iii) | What fraction of the cylinder’s volume is the cone?  ……………………..………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** | |
|  | | (iv) | Initially, the cylinder is filled to capacity with 240 litres of water. When the cone is carefully placed inside the cylinder, some of the water is displaced and spills out. What volume of water remains in the cylinder?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** | |

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| **Question 26**  There were two teams competing to represent NSW in the sport of Farnarkling.  Data was collected on the points scored by the two teams in their last 20 games.  The results for Team A are shown in the five-number summary below.  2, 8, 13, 24, 38  For Team B a box-plot has been drawn. | | |
|  | | |
| (a) | On the graph above, draw a box-plot for Team A. | **2** |
| (b) | Compare the shapes of the two distributions and discuss what statistical measures could be used to make a recommendation for the team to represent NSW.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **2** |

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| **Question 27**  Answer the following questions using the graph below. | | |
| (a) | What is the gradient of this straight line?  ……………………..………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (b) | What is the y-intercept of this straight line?  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (c) | What is the equation of this straight line?  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** |
| (d) | What is the x-intercept of this straight line?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **1** |

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| **Question 28**  A container for sweets is in the shape of the irregular prism shown below. | | |
| (a) | Use two applications of the trapezoidal rule and the measurements below to approximate the area of the front face of the prism.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………… | **2** |
| (b) | Calculate the volume of the prism.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |

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| --- | --- | --- |
| **Question 29**  Thomas bought a $1250 tablet on hire-purchase plan, consisting of a deposit, then monthly payments. He paid a $100 deposit and monthly instalments $60 for two years. | | |
| (a) | Calculate the balance owing on the tablet.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |
| (b) | What is the total amount paid for the tablet?  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (c) | Find the amount of interest paid for the tablet.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **1** |
| (d) | What is the simple interest rate charged per annum? Give your answer to 2 decimal places.  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………  ……………………..……………………………………………………………………………………………………………… | **2** |
| **End of Paper** | | |



**Carlingford High School**

**Preliminary Yearly Examination 2018**

**Mathematics Standard**

Student Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section I** – **Multiple Choice Answer Sheet**

Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sample:** | 2 + 4 = | (A) 2 | (B) 6 | (C) 8 | (D) 9 |
|  |  |  |  |  |  |
|  |  | A oval2 | B oval-fill | C oval2 | D oval2 |

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | A oval-fill | B oval-cross | C oval2 | D oval2 |

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word **correct** and drawing an arrow as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | A oval-cross | B oval-correct | C oval2 | D oval2 |

