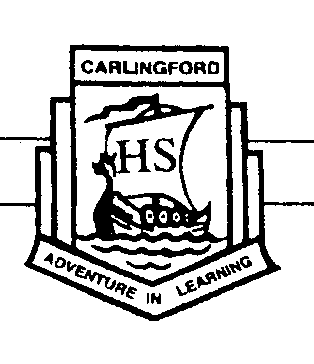
**Carlingford High School**



**Mathematics**

**Year 7 Term 4 Test**

**2017**

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

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Circle your class below. | | | | | | | |
| Class: | **7C** | **7A** | **7R** | **7L** | **7I** | **7N** | **7G** |

*Time allowed:* ***55 minutes***

* NO Calculators allowed.
* Complete the examination in blue or black pen.
* Show all necessary working.
* Attempt all questions.
* Extension questions are marked with an asterisk \*.

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| --- | --- | --- | --- | --- | --- | --- |
|  | **Data** | **Number Theory** | **Probability** | **Geometric Figures** | **Total** |  |
| **Questions** | **17** | **11** | **16** | **15** |  |  |
| **Extension** | **3** | **4** | **2** | **2** | **11** |  |
| **Total** | **20** | **15** | **18** | **17** | **70** | **%** |

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| --- | --- | --- | --- |
| **Data Representation** | | | |
| 1. Complete the sentences below with the correct words about graphs.  |  |  |  | | --- | --- | --- | | Graphically | Line | Sector | | Column | Easily | Picture | | Divided Bar | Dot plot | Visually |  * 1. Graphs are used to display data \_\_\_\_\_\_\_\_\_\_\_\_\_   2. \_\_\_\_\_\_\_\_\_\_\_\_\_ graphs and \_\_\_\_\_\_\_\_\_\_\_\_\_ graphs are used to display data that represents parts of a whole.  1. Use the graph below to answer the following questions.   **Pets owned by 7G Students**     1. What was the 2nd most popular pet? 2. What fraction of 7G’s pets were birds?      1. What is the angle represented by the Dog sector?   \* |  | 1. Which is the correct dot plot for the data below representing favourite types of apples? Circle the correct answer. |  |
| 1. Explain why the graph of Cereal sales is misleading.      1. The graph below shows the number of bananas produced by Banana Boat Inc. for a 5 year period.      1. How many bananas were grown in 2012? 2. How many more bananas were produced in 2014 than 2015?   \*   1. Give a reason that the production of bananas was so low in 2013 compared to 2014. |  | 1. A survey was conducted to count the number of matches in a box at the factory. The results are below.      1. Draw a stem and leaf plot for this data.      1. Are there any clusters of data? If so where are they located? 2. Are there any outliers in the matches data? If so what are they? |  |

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| **Number Theory** | | | |
| 1. Complete the following sentences with the most appropriate word. Use correct spelling. 2. 1, 2, 3, 6, 9, 18 are the \_\_\_\_\_\_\_\_\_\_\_\_\_s of 18. The \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ of 18 and 27 is 9. 3. A number that is not divisible by numbers other than itself and 1 is called \_\_\_\_\_\_\_\_\_\_\_ . 4. Which of the following are NOT multiples of 4? Circle all answers.   2, 4, 6, 8, 10, 12, 14, 16, 18   1. Write in index notation.      1. If then find . 2. 2118 is divisible by which of the following numbers? Circle all that apply.     2, 3, 4, 5, 6, 8, 9, 10, 12 |  | 1. a) Complete the prime factor tree for 42.      1. Complete the prime factor tree for 140.      1. Write 140 as a product of its prime factors.   \*   1. Using the prime factor trees above, find the HCF of 42 and 140.   \*   1. Using the prime factor trees above, find the LCM of 42 and 140. |  |
| **Probability** | | | |
| 1. For the spinner below use a word to describe the following probabilities.     The spinner is spun and it lands on:   1. Blue      1. Red, gold or blue 2. Black 3. Abby bought a new spinner.      1. List the sample space of Abby’s spinner. 2. If she spins it what is the probability that it will land on green? 3. Complete the sentence. The events on Abby’s spinner are all \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ |  | 1. Describe an event that has a chance of occurring. 2. A card is chosen at random from a standard deck of 52 cards. What is the probability that card is: 3. A red card 4. An Ace 5. The 4 of spades 6. A picture card 7. A club |  |
|  | | **Properties of Geometric Figures** | |
| 1. In year 7 there are 210 students. A survey was taken to see how these students get to school. 115 students walk, 53 catch a bus, 32 come by car and 10 ride a bike. If one student is chosen at random, find the probability that the student chosen will. 2. Not walk. 3. Come by car. 4. Walks or rides a bike to school. 5. If someone tells you that an event has a probability of 1.5 of happening, how do you know that they have made a mistake?   \*   1. What is the probability of rolling a sum of seven with one roll of a pair of fair standard dice? |  | 1. Complete the sentences below with the correct words about shapes. Use correct spelling. 2. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a quadrilateral with only one pair of parallel sides. 3. \_\_\_\_\_\_\_\_\_\_\_\_\_ triangles have 3 sides of different lengths. 4. When the parallelogram PQRS is translated 3 units right and 2 units down, which of the following images represents the outcome? Circle the correct answer. |  |
| 1. How many axes of symmetry does this shape have?      1. What is the order of rotational symmetry for this shape?      1. State whether the 2nd shape has been translated, reflected or rotated into its new position. |  | 1. Complete the following shape, given the axes of symmetry. |  |
| 1. Find the value of the indicated angles in the following shapes.   Give reasons for your answers.      ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angle of a triangle)   1. * 1. Give a reason why      * + 1. Find the value of   ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) |  | \* |  |

**END OF EXAM**