**Year 9 Foundation: Assessment 1 Revision Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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|  | Topic 1: Negative numbers | Mark |
| 1. | Calculate the following:   1. 4 – 7 = ………… 2. -3 + 1 = ………… 3. -10 – 5 = ………… 4. -7 + 4 – 2 = ………… | 4 |
| 2. | Re-write these numbers in order of size. Start with the smallest number.  –5 3 –1 0 -8 2.7 ………… ………… ………… ………… ………… | 1 |
| 3. | The table shows the midday temperatures in 4 different cities on a Monday in January.   |  |  | | --- | --- | | **City** | **Midday temperature (°C)** | | Belfast | 5 | | Cardiff | –1 | | Glasgow | –6 | | London | –4 |   a) Which city had the lowest temperature? ……………………………  b) Work out the difference in temperature between Cardiff and Belfast.  ………………… °C  By Tuesday, the midday temperature in London had risen by 7 °C.  c) Work out the midday temperature in London on Tuesday.  ………………… °C | 3 |
| 4. | The table shows the temperatures in three cities at noon one day.   |  |  |  | | --- | --- | --- | | Oslo | New York | Cape Town | | –13°C | –5°C | 9°C |   a) Work out the difference in temperature between Oslo and New York.  ………………… °C  b) Work out the difference in temperature between Cape Town and Oslo.  ………………… °C | 2 |

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|  | Topic 2: Algebraic manipulation | Mark |
| 1. | If a = 3, give the value of:   1. a - 7 = ………… 2. 4a = ………… 3. 2a + 5 = ………… | 3 |
| 2. | a) Simplify *a + a + a + a* ……………………………  b) Simplify 3 × *b* × 4 ……………………………  c) Simplify 4*a* + 5*b* – 2*a* + b ……………………………  d) Expand *x*(*x* – 6) …………………………… | 4 |
| 3. | *y* = 5*x* – 24  Find the value of *y* when *x* = 4  *y* *=* …………………………… | 1 |
| 5. | The cost, in pounds, of hiring a car can be worked out using this rule.   |  | | --- | | Add 3 to the number of days’ hire  Multiply your answer by 10 |   a) Work out the cost of hiring a car for 4 days.  £……………………………  Bishen hired a car. The cost was £120  b) Work out the number of days for which Bishen hired the car.  …………………………… | 2 |

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|  | Topic 3: Averages | Mark |
| 1. | Peter rolled a 6-sided dice ten times. Here are his scores: 3 4 5 6 3 1 4 2 5 1  a) Work out the median of his scores.  ……………………………  b) Work out the mean of his scores.  …………………………… | 2  2 |
| 2. | Here are the temperatures of 6 cities.  5 9 -8 14 -10 14  a) Work out the range of these temperatures.  ……………………………  b) Work out the median temperature.  ……………………………  c) Work out the mean temperature.  …………………………… | 1  2  2 |
| 3. | Sophie asked the students in her class how they travelled to school. The bar chart shows some information about the results, for everyone in Sophie’s class.    4 students travel to school by car.  7 students travel to school by bus.  a) Complete Sophie’s bar chart.  b) How many students in Sophie’s class cycle to school?  ……………………………  c) Which method of travelling to school is the mode?  …………………………… | 3 |

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|  | Topic 4: Number properties | Mark |
| 1. | Which number is a multiple of 6? Circle your answer.  8 22 16 10 18 | 1 |
| 2. | Which number is a prime number? Circle your answer.  4 9 15 12 7 | 1 |
| 3. | Which number is a factor of 28? Circle your answer.  9 7 27 56 280 | 1 |
| 4. | |  |  |  |  |  | | --- | --- | --- | --- | --- | | factor | multiple | square | square root | half |   a) Use a word from the list above to complete the following sentence.  10 is a …………………………………… of 5  b) From the list below, write down the odd number.  12 15 18 20 24 …………………  c) From the list below, write down the square number.  10 12 14 16 18 20 ………………… | 3 |
| 5. | Here is a list of numbers.   |  | | --- | | 2 3 4 5 6 7 8 9 |   From the list of numbers write down:  a) all the odd numbers …………… and …………… and …………… and ……………  b) all the square numbers …………… and ……………  c) all the multiples of 3 …………… and …………… and ……………  d) all the factors of 10 …………… and …………… | 4 |