**Year 10 Revision HW Assessment 1 NON-CALCULATOR Foundation Standard**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| Number 1 | /10 | Algebra | /16 | Statistics | /12 | Number 2 | /15 |

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| --- | --- | --- |
|  | **Directed Numbers** |  |
| **1.****S** | Sally wrote down the temperature at different times on 1st January 2015.

|  |  |
| --- | --- |
| **Time**  | **Temperature**  |
| midnight  | -7 °C  |
| 4 am  | –10 °C  |
| 8 am  | – 4 °C  |
| noon  | 6 °C  |
| 3 pm  | 3 °C  |
| 7 pm  | –1 °C  |

a) Write down the **lowest** temperature ………………°Cb) Work out the **difference** in the temperature between (i) 4 am and 7 pm ………………°C (ii) 8 am and 3 pm. ………………°CAt 11 pm that day the temperature had fallen by 5 °C from its value at 7 pm.c) Work out the temperature at 11 pm  ………………°C | **(1)****(2)****(1)** |
| **2.****S** | Work out:a) -3 + 6 = ……… b) -6 - 5 = ………c) -8 + - 4 = ……… d) -2 - - 9 = ………e) -6 x 3 = ……… f) -40 ÷ - 8 = ……… | **(6)** |
|  | **TOTAL** | **10** |
|  | **Basic Algebra** |  |
| **1.****S** | Simplifya) c + c + c + c + c …………………… b) p x p x p ……………………c) 8g - 2g …………………… d) 6*a* + 7*b + a* + 4*b*  ……………………e) 8*c +* 9*d* – 3*c* – 6*d* …………………… f) 9*a*  x 4*b* …………………… |  **(6)** |
| **2.****S** | Expand the following:a) 6(3*a* – 5) ………………………b) 2a(a + 4b) ……………………… | **(1)****(1)** |
| **3.****F** | Expand and simplify the following a) 5(3p + 5) + 6(5p – 4)  ………………………b) (p + 7)(p – 3) ……………………… |  **(2)** **(2)** |
| **4.****F** | Jennifer has *x* pencils.Jack has 9 more. Write down an expression, in terms of *x*, for the number of pencils Jack has. ………………………James has 5 times as many pencils as Jack.Write down an expression, in terms of *x*, for the number of pencils James has. ……………………… |  **(1)** **(1)** |
| **5.****S** | FacoFactorise 24a + 16 ……………………… |  **(1)** |
| **7.****F** | Work out the value of 4a + ab when a = 6 and b = 3 ……………………… | **(1)** |
|  | **TOTAL** | **16** |
|  | **Averages** |  |
| **1.****S** | Here are the temperatures recorded over 6 days -2 7 8 6 -3 8 a) Write down the modal temperature ……………………… b) Work out the median temperature. ………………………c) Work out the range of the temperatures. ………………………d) Work out the mean temperature ……………………… | **(1)****(2)****(1)****(2)** |
| **2.****F** | Ed has 4 cards. There is a number on each card.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **9** |  | **7** |  | **11** |  | ……… |

The mean of the 4 numbers on Ed's cards is 8. Work out the number on the 4th card. | **(1)** |
| **3.****F** | Here are three cards.

|  |  |  |  |  |
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 The median of the numbers is 8 and the range is 7. What could the numbers be? | **(1)** |
| **4.** | Rosie asks her friends what show size they are. The results are shown below

|  |  |
| --- | --- |
| **Shoe Size** | **Frequency** |
| 3 | 4 |
| 4 | 6 |
| 5 | 5 |
| 6 | 3 |

Rosie said that the modal shoe size is 6. Rosie is wrong. Explain why.………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | **(1)** |
| **5.****F** | Vanessa recorded the time 10 students took to get to school.

|  |  |  |  |
| --- | --- | --- | --- |
| **Time (*t* minutes)** | **Frequency** |  |  |
| 0 < *t* ≤ 10 | 4 |  |  |
| 10 < *t* ≤ 20 | 2 |  |  |
| 20 < *t* ≤ 30 | 3 |  |  |
| 30 < *t* ≤ 40 | 1 |  |  |
| Total | 10 |  |  |

 Work out an estimate for the mean amount of time taken.……………………… minutes | **(3)** |
|  | **TOTAL** | **12** |
|  |  |  |
|  |  |  |
|  | **Number 2** |  |
| 1. S |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 16 | 32 | 15 | 8 | 12 | 2 | 3 |

Using only the numbers in the rectangle, write downa) a multiple of 8 ……………………… b) a factor of 21 ………………………c) a prime number ……………………… d) a square number ……………………… | **(4)** |
| **2.****F** | Use the Venn diagram below to sort these numbers.**3, 8, 10, 15, 20, 23, 25, 30** **Multiples of 5 Odd Numbers**    |  **(2)** |
|  |  |  |
| **3.****S** | Write 40 as a product of its prime factors.………………………………… | **(2)** |
| **4.****F** | What is the lowest common multiple of 40 and 24 .……………………… | **(1)** |
| **5.****F** | Doughnuts are sold in packs of 8. Cakes are sold in boxes of 6. What is the smallest number of packs of doughnuts and the smallest number of boxes of cakes that can be bought so that the number of doughnuts is equal to the number of cakes?Number of Packs of Doughnuts ………………………Number of Boxes of Cakes ……………………… |  **(2)** |
| **6.****S** | Calculatea) 16 - 4 x 3 = ………………… b) 9 + 28 ÷ 7 = …………………c) (11 – 6) x 3 = d) 2 x 52 = ………………… | **(4)** |
|  | **TOTAL** | **15** |