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

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

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| Number 1 | /10 | Algebra | /16 | Statistics | /13 | 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  | –9°C  |
| 8 am  | – 4 °C  |
| noon  | 7 °C  |
| 3 pm  | 5 °C  |
| 7 pm  | –2 °C  |

a) At what time was the lowest temperature ………………b) 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 4 °C from its value at 7 pm.c) Work out the temperature at 11 pm  ………………°C | **(1)****(2)****(1)** |
| **2.****S** | Work out:a) -2 + 9 = ……… b) -3 - 10 = ………c) -3 - - 4 = ……… d) -3 + - 5 = ………e) -7 x -4 = ……… f) 35 ÷ - 7 = ……… | **(6)** |
|  | **TOTAL** | **10** |
|  | **Basic Algebra** |  |
| **1.****S** | Simplifya) c + c + c + c …………………… b) p x p x p ……………………c) 5g - 3g …………………… d) 5*a* + 10*b + a -* 4*b*  ……………………e) c2 + c2 …..……………… f) 3*a*  x 5*b* …………………… |  **(6)** |
| **2.****S** | Expand the following:a) 2(7*a* – 1) ………………………b) 4a(a + 3) ……………………… | **(1)****(1)** |
| **3.****F** | Expand and simplify the following a) 4(2p + 5) + 8(p – 2)  ………………………b) (p + 6)(p + 4) ……………………… |  **(2)** **(2)** |
| **4.****F** | Jennifer bakes *x* cakes.Jack bakes 5 more. Write down an expression, in terms of *x*, for the number of pencils Jack has. ………………………James has baked 3 times as many cakes as Jack.Write down an expression, in terms of *x*, for the number of cakes James has baked. ……………………… |  **(1)** **(1)** |
| **5.****S** | FacoFactorise 10a + 30 ……………………… |  **(1)** |
| **7.****F** | Work out the value of 5a + ab when a = 4 and b = 3 ……………………… | **(1)** |
|  | **TOTAL** | **16** |
|  | **Averages** |  |
| **1.****S** | Here are the temperatures recorded over 6 days -1 7 9 6 -4 7 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.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **3** |  | **7** |  | **2** |  | ……… |

The mean of the 4 numbers on Ed's cards is 5. 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 9 and the range is 4. What could the numbers be? | **(2)** |
| **4.** | Rosie asks her friends what show size they are. The results are shown below

|  |  |
| --- | --- |
| **Shoe Size** | **Frequency** |
| 4 | 6 |
| 5 | 7 |
| 6 | 4 |
| 7 | 4 |

Rosie said that the modal shoe size is 4. Rosie is wrong. Explain why.………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | **(1)** |
| **5.****F** | Vanessa recorded the time 10 students took to complete a homework task.

|  |  |  |  |
| --- | --- | --- | --- |
| **Time (*t* minutes)** | **Frequency** |  |  |
| 0 < *t* ≤ 20 | 5 |  |  |
| 20 < *t* ≤ 40 | 2 |  |  |
| 40 < *t* ≤ 60 | 2 |  |  |
| 60 < *t* ≤ 80 | 1 |  |  |
| Total | 10 |  |  |

 Work out an estimate for the mean amount of time taken.……………………… minutes | **(3)** |
|  | **TOTAL** | **13** |
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|  |  |  |
|  | **Number 2** |  |
| 1. S |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 36 | 3 | 15 | 8 | 5 | 2 | 20 |

Using only the numbers in the rectangle, write downa) a multiple of 10 ………………… 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.**1, 2, ,3, 4, 5, 6 ,7, 8, 9, 10** **Multiples of 3 Odd Numbers**    |  **(2)** |
| **3.****S** | Write 30 as a product of its prime factors.………………………………… | **(2)** |
| **4.****F** | What is the lowest common multiple of 30 and 12 .……………………… | **(1)** |
| **5.****F** | Hot dogs are sold in packs of 9. Bread rolls are sold in packs of 12. What is the smallest number of packs of hotdogs and the smallest number of packs of bread rolls that can be bought so that the number of hotdogs is equal to the number of bread rolls?Number of Packs of Hot dogs ………………………Number of Packs of Bread rolls ……………………… |  **(2)** |
| **6.****S** | Calculatea) 20 - 4 x 3 b) 9 + 21 ÷ 3 = ……………………………………… = ………………………………………c) (8 – 6) x 3 d) 3 x 22 = ……………………………………… = ……………………………………… | **(4)** |
|  | **TOTAL** | **15** |