YEAR 7 ASSESSMENT HOMEWORK – calculator NOT allowed CORE

NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TEACHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| Negative Numbers | /10 | Algebraic Manipulation | /10 | Averages |  /10 | Number properties | /10 |

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| --- | --- | --- |
|  | **Negative Numbers** |  |
| **1.** | Fill in the missing numbers on this scale

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -12 |  | -6 | -3 |  | 3 |  | 9 | 12 |  | 18 |

 | **(1)** |
| **2.** | Put the correct inequality sign in the box. Choose from > <

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a) | -3 |  | -11 |  |  |  |
|  |  |  |  |  |  |  |
| b) | -3 |  | 5 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |

 | **(2)** |
| **3.** | Write down the following numbers in order from **smallest** to **largest**:  –3.7 –3.07 –3.71 –3.27 –3.5  ……………… ……………… ……………… ……………… ……………… | **(1)** |
| **4.** | Calculate the followinga) 6 – 9 = ……… b) -4 – 3 = ……… c) -11 + 2 = ……… d) 5 - 17 = ………e) -6 - 7 + 8 = ……… f) -4 + 7 – 2 = ……… | **(6)** |
|  | **TOTAL** | **/10** |

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|  | **Algebraic Manipulation** |  |
| **1.** | Simplify the followinga) *d + d + d* …………………………b) 2*a* + 4*c* + 5*a* + 2*c* …………………………c) 15*a* + 6*b* – 4*a*  – *b* …………………………d) d x 2e ………………………. | **(4)** |
| **2.** | Write down the algebraic expression for:a) 7 more than a …………………………d) half of g ………………………… | **(2)** |
| **3.** | The perimeter of this shape is 3a + 2b.aaabb **p = 3a + 2b**Write an expression for the perimeters of each of these shapes.4e 4e 2f 8f  ggg…………………………………………… …………………………………………… | **(2)** |
| **7.** | The formula shows how much you pay to hire a car. **T = N x 30**  N = number of days hired for T = total amount paid in £a) Leena hires the car for 4 days.  How much must she pay? …………………………b) Tom pays £270 to hire the car.  For how many days did he hire the car? ………………………… | **(1)****(1)** |
|  | **TOTAL** | **/10** |

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| --- | --- | --- |
|  | **Averages** |  |
| **1.** | Here are some numbers:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **5** |  | **8** |  | **2** |  | **7** |  | **8** |

Find:a)The **mode**. ………………………… b) The **median**. …………………………c)The **mean**. …………………………d) The **range**. ………………………… | **(4)** |
| **2.** | Write two numbers which have a mean of 7 and a range of 6?............................. and ............................. | **(2)** |
| **3.** | The table shows the midnight temperature on each day for eight days.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Day | M | T | W | T | F | S | S | M |
| Temperature (°C) | -5 | -2 | 3 | 1 | 0 | -3 | 3 | -4 |

a) Work out the **range** of temperatures. ………………………°Cb) Find the **modal** temperature. ………………………°Cc) Find the **median** temperature. ………………………°C | **(1)****(1)****(2)** |
|  | **TOTAL** | **/10** |

|  |  |  |
| --- | --- | --- |
|  | **Number Properties** |  |
| **1.** | Sort the numbers below into the correct section.**2, 3, 5,10, 17, 29**  **Factors of 20 Odd Numbers**   | **(3)** |
| **2.** | Write down the first 5 **multiples** of 5  ……………………………………………………………………Write down the first 5 **multiples** of 6 ……………………………………………………………………Write down the **lowest common multiple** ( LCM ) of 5 and 6 ……………… |  **(3)** |
| **3.** | Write down all the **factors** of 24……………………………………………………………………………………………………………………………………………………Write down all the **factors** of 10 ……………………………………………………………………………………………………………………………………………………Write down the **highest common factor** ( HCF ) of 24 and 10 ……………… | **(2)****(1)****(1)** |
|  | **TOTAL** | **/10** |