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   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | -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 following a) 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 following  a) *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.  a  a  a  b  b  **p = 3a + 2b**  Write an expression for the perimeters of each of these shapes.  4e  4e  2f  8f  g  g  g  …………………………………………… …………………………………………… | **(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. ………………………°C  b) Find the **modal** temperature. ………………………°C  c) Find the **median** temperature.  ………………………°C | **(1)**  **(1)**  **(2)** |
|  | **TOTAL** | **/10** |

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|  | **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** |