**Year 8 Higher Standard: Assessment 1 Revision Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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|  | Topic 1: Negative Numbers | Mark |
| 1. | Calculate the following:3 + -2 = ………… -4 + 2 = ………… -2 – 1 = ………… -3 - -4 = ………… 7 – 10 = ………… 3 - -1 = ………… -5 + -2 = ………… -6 – 3 = …………  | 8 |
| 2. | Evaluate the following:3 x -2 = ………… -4 x -2 = ………… 3 x -8 = ………… -4 x –5 = ………… 16 ÷ - 2 = ………… -15 ÷ 3 = ………… -8 ÷ -2 = ………… 10 ÷ - 5 = …………  | 8 |
| 3. | Complete the tables

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| --- | --- | --- | --- |
| **+** | **5** | **-4** |  |
| **-2**  | 3 | -6 | -1 |
| **3** |  | -1 |  |
| **-4** |  |  | -3 |

|  |  |  |  |
| --- | --- | --- | --- |
| **-** | **6** | **-2** | **3** |
| **10** | 4 | 12 |  |
| **-4** | -10 |  |  |
|  | -7 |  | -4 |

|  |  |  |  |
| --- | --- | --- | --- |
| **x** | **7** | **-4** | **5** |
| **-2** | -14 | 8 | -10 |
| **-5** |  |  | -25 |
|  | 21 |  |  |

 | 555 |
| 4. |  Calculate:- 2 + -3 + 7 = ………… 3 + -4 + -5 = ………… 3 - - 4 + - 2 = …………  | 3 |
| 5. | Fill in the blanks5 x ……… = -35 30 ÷ ……… = -6 -2 x –3 x ……… = 42  | 3 |
| 6. | Calculate: ( 2 – 4 ) 2 = - 32 x -2 = (- 3) 2 x -2= ………………………… = ………………………… = ………………………… = ………………………… = ………………………… = …………………………   | 3 |

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|  | Topic 2: Algebraic Manipulation | Mark |
| 1. | Simplify these expressionsc + c + c = ………… 2c + 3d + 6c - 2d = ………… c x c x c = ………… 3a x 7a = ………… 4d2 x 5d = ………… 4cd2 x 3c3d = ………… | 6 |
| 2. | Simplify each expression, giving your answer as a **single** power.23 x 24 = ………… 4-3 x 44 = ………… 3-2 x 3-5 = ………… (52)3 = ………… 57 ÷ 52 = ………… 75 ÷ 7-3 = ………… | 6 |
| 3. | Multiply out the following brackets:2(x + 3) = ……………………… -4(x – 3y + 2) = ……………………… 2x(x + 5) = ……………………… 15 + 3(2a - 4) = ………………………………  | 4 |
| 4. | Factorise these expressions:5a + 10b = 5( …… + …… ) 2c + 6d = ……………………………… | 2 |
| 5. |

|  |  |
| --- | --- |
| a |  |
|  | 2a + 3b |

a) Find an expression for the perimeter of this rectangle.………………………………b) If a = 3 cm and b = 7 cm, calculate the area of the rectangle.……………………………… | 12 |
| 6. | A van hire charges using this formula**Amount charged = 40 + (5 x number of miles )**a) How much would it cost if Barry hires the van for 20 miles? ……………b) Dennis is charged £255. How many miles did he travel?…………… | 22 |

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|  | Topic 3:Averages  | Mark |
| 1. | The mean of two numbers is 12. What could the numbers be?……………..… and ……..…………The mean of 5 numbers is 7. What do the numbers add up to?…………………………... | 2 |
| 2. | The mean of four numbers is 6. The mode is 4. The range is 14. What are the four numbers?………… ………… ………… ………… | 2 |
| 3. | A girls football team scored these goals in 7 matches. 3, 4, 5, 5, 6, 8, 11A boys football team scored these goals in 7 matches. 4, 4, 5, 5, 5, 6, 6

|  |  |
| --- | --- |
| Mean number of goalsscored by the girls team | Mean number of goalsscored by the boys team |
|  |  |

Use your answers to decide which team is better. Explain your answer.………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

|  |  |
| --- | --- |
| Range of goalsscored by the girls team | Range of goalsscored by the boys team |
|  |  |

Use your answers to decide which team is more consistent. Explain your answer.……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………… | 2222 |
| 4. | Helen recorded the number of hurdles were knocked over in each race on Sports Day.

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| --- | --- | --- |
| **Number hurdles knocked over** | **Frequency** | **Subtotal** |
| 1 | 7 | 1 x 7 = ……… |
| 2 | 4 |   |
| 3 | 2 |  |
| 4 | 6 |  |
| 5 | 1 |  |
| **Totals** |  |  |

Calculate the mean number of hurdles knocked over? ………………  | 3 |

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|  | Topic 4: Number Properties | Mark |
| 1. | a) Write 36 as a product of its primes by completing the prime factor tree below. 36 = ………………………… | 1 |
|  | b) Write 24 as a product of its primes by drawing your own tree below. 24 = ………………………… | 2 |
|  | c) Use your answers above to find the Highest Common Factor of 36 and 24.………………………… | 1 |
| 2. | a) Write 16 as a product of its primes. 16 = ………………………… | 2 |
|  | b) Write 20 as a product of its primes. 20 = ………………………… | 2 |
|  | c) Use your answers above to find the Lowest Common Multiple of 16 and 20.………………………… | 2 |