**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   |  |  |  |  | | --- | --- | --- | --- | | **+** | **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 |  |  | | 5  5  5 |
| 4. | Calculate:  - 2 + -3 + 7 = ………… 3 + -4 + -5 = ………… 3 - - 4 + - 2 = ………… | 3 |
| 5. | Fill in the blanks  5 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 expressions  c + 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.  ……………………………… | 1  2 |
| 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?  …………… | 2  2 |

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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, 11  A boys football team scored these goals in 7 matches. 4, 4, 5, 5, 5, 6, 6   |  |  | | --- | --- | | Mean number of goals  scored by the girls team | Mean number of goals  scored by the boys team | |  |  |   Use your answers to decide which team is better. Explain your answer.  ………………………………………………………………………………………………………………………………………………………………  ………………………………………………………………………………………………………………………………………………………………   |  |  | | --- | --- | | Range of goals  scored by the girls team | Range of goals  scored by the boys team | |  |  |   Use your answers to decide which team is more consistent. Explain your answer.  ………………………………………………………………………………………………………………………………………………………………  ……………………………………………………………………………………………………………………………………………………………… | 2  2  2  2 |
| 4. | Helen recorded the number of hurdles were knocked over in each race on Sports Day.   |  |  |  | | --- | --- | --- | | **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 |