**Year 9 Core Standard: Assessment 1 Revision Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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|  | Topic 1: Negative numbers | Mark |
| 1. | Work out the following   1. 4 – 5 = ………… b) -3 + 7 = ………… c) -6 – 3 = …………   d) -7 + 10 = ………… e) 4 - -6 + -2 = ………… f) -4 + -2 - -3 = …………  g) 8 x -12 = ………… h) -20 ÷ -4 = ………… i) (-4)2 = ………… | (9) |
| 2. | Complete this addition table.   |  |  |  |  | | --- | --- | --- | --- | | **+** | **3** |  | **-4** | | **-2** | 1 |  |  | | **4** |  | -3 | 0 | |  | 8 |  | 1 | | (5) |
| 3. | Find the missing number in these calculation   1. -4 x -5 = ………… b) -8 ÷ 2 = ………… c) -6 – …………= -9   d) …………- -10 = 12 e) 4 x ………… = -24 f) ………… ÷ -5 = 7 | (6) |

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|  | Topic 2: Algebraic manipulation | Mark |
| 1. | Simplify:  a) 3*c + c +* 2*c* ………………………  b) 5*e - f* + 2e + 3*f* ………………………  c) 5*r* x 3*t* ………………………  d) 2*a* x3*a* ………………………  e) 3(*a* + 5*b* – 8) ……………………… | (1)  (2)  (1)  (1)  (2) |
| 2. | *p* = 3 *r* = -5  a) Work out the value of 6– 2r  ………………………  b) Work out the value of *pr* + *r*  ………………………  c) Work out the value of 3(*p*2 + 1)  ……………………… | (2)  (2)  (2) |
| 3. | In the diagram, all measurements are in centimetres.  The lengths of the sides of the quadrilateral are  2*r* + 5 2*r* 4*r* – 3 *r*  Find an expression, in terms of *r*, for the perimeter of the quadrilateral. Give your expression in its simplest form.  ……………………… | (2) |
| 4. | You can use this rule to work out the total charge for hiring a cement mixer.   |  | | --- | | **Total charge = £30 plus £7 for each hour of hire** |   On Monday, Sally hired a cement mixer for 4 hours.  a) Work out Sally’s total charge.  £ ………………………  On Tuesday, Tom hired a cement mixer. Tom’s total charge was £51  b) Work out for how many hours Tom hired the cement mixer.  ……………………… hours | (2)  (3) |

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|  | Topic 3: Averages | Mark |
| 1. | Peter rolled a 6-sided dice ten times. Here are his scores: 3, 2, 4, 6, 3, 3, 4, 2, 5, 4  a) Work out the median of his scores.  ………………………  b) Work out the range of his scores  ………………………  **c**) Work out the mean of his scores.  ……………………… | (2)  (1)  (2) |
| 2. | 20 students scored goals for the school hockey team last month. The table gives information about the number of goals they scored.   |  |  |  | | --- | --- | --- | | **Goals scored** | **Frequency** |  | | 0 | 2 |  | | 1 | 7 |  | | 2 | 3 |  | | 3 | 5 |  | | 4 | 3 |  | | **Total** |  |  |     Work out the mean number of goals scored  ……………………… | (3) |
| 3. | Write down four numbers with a mean of 6 and a range of 10.  ………… ………… ………… ………… | (2) |

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|  | Topic 4: Number properties | Mark |
| 1. | a) Work out the Highest Common Factor (HCF) of 16 and 24.  ………………………  b) Work out the Lowest Common Multiple (LCM) of 30 and 18.  ……………………… | (2)  (2) |
| 2. | a) Express 35 and 84 as a products of their prime factors.  35 = ……………………… 84 = ………………………  b) Find the Highest Common Factor (HCF) of 84 and 35  ………………………  c) Find the Lowest Common Multiple (LCM) of 84 and 35  ……………………… | (4)  (1)  (1) |
| 3. | Work out  a) 2 × 3 + 4  ………………………  b) 10 – 2 × 52  ………………………  c) (19 + 5) ÷ 23    ……………………… | (1)  (2)  (2) |
| 4. | Add brackets ( ) to make this statement correct.    6 - 2 × 5 + 1 = 24 | (2) |