YEAR 7 Homework Assessment Review TEST 2 – Non-calculator Enhanced

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

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| Perimeter and Area | /10 | Ratio and Proportion | /10 | Sequences | /10 | Probability | /10 |

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|  | **Perimeter and Area** |  |
| **1.** | Find the **area** of these shapes. (Diagrams not to scale) |  |
| **F** | 30mm  6cm  5cm  Area = …………………………… | **(1)** |
|  | 7.5cm  50mm  13cm  Area = …………………………… | **(2)** |
|  | 14 cm  5 cm  11 cm    Area = …………………………… | **(3)** |
|  | 6 m  1.5 m  250 cm  650 cm  Area = …………………………… | **(3)** |
| **2.**  **M** | Find an expression for the area of this shape.  |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | | 6 |  |  |  | |  |  |  |  | |  |  | 2a - 3 |  |   Area = ………………………… | **(1)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Ratio and Proportion** |  |
| **1.**  **S** | Write the ratio 18 : 30 in its simplest form. ………………………… | **(2)** |
| **2.**  **F** | A pile of sand has a weight of 80 kg.  The sand is put into a small bag, a medium bag and a large bag in the  ratio 2 : 5 : 9  Work out the weight of sand in each bag.        small bag …………… kg medium bag …………… kg large bag …………… kg | **(3)** |
| **3.**  **M** | Here is a list of ingredients for making 18 mince pies.    Elaine wants to make 27 mince pies.  Elaine has 400 g of butter       500 g of flour  200 g of sugar  500 g of mincemeat       3 eggs  Does Elaine have enough of each ingredient to make 27 mince pies? You must show clearly how you got your answer | **(3)** |
| **4.**  **F** | The cost of 6 cups is £8.40 Work out the cost of 10 of these cups  ………………………… | **(2)** |
|  |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Sequences** |  |
| **1.**  **S** | Complete the **first four terms** of the sequences whose general (***n*th**) rules are:  a) 4*n* 4, …… , …… , …… rk)  b) 3*n* + 3 6 , …… , …… , …… s)  c) 7 – 2*n* 5 , …… , …… , …… s) | **(1)**  **(1)**  **(1)** |
| **2.**  **F** | a) Find the nth term for this sequence: 50, 46, 42, 38, ……  ……………………  b) Calculate the 20th term in this sequence  …………………… | **(2)**  **(1)** |
| **3.**  **M** | Here is a pattern made with matchsticks:  Pattern 1 Pattern 2 Pattern 3  b) Calculate the position to term rule (**nth term**) of the sequence ………………  c) Use this rule to calculate the number of matchsticks in the 50th pattern  ………………………………………………………………………………………………………………………………………………  d) I have 101 matchsticks, which pattern number would this be ………………………… | **(2)**  **(1)**  **(1)** |
|  | **TOTAL** | **(10)** |
|  | **Probability** |  |
| **1.**  **S** | EAD1-3Twelve balls numbered from 1 to 15 are placed in a bag.  If I pick one ball, what is the probability that the number is:  a) 8 ……………  b) A factor of 10 ……………  c) A multiple of 4 ……………  d) A square number …………… | **(4)** |
| **2.**  **F** | The probability that a biased dice will land on a four is  Peter is going to roll the dice 240 times.  Work out an estimate for the number of times the dice will land on a four.  …………… | **(1)** |
| **3.**  **M** | Each day, Anthony travels to work. He can be on time or early or late.  The probability that he will be on time is 0.4  The probability that he will be early is 0.39.  Work out the probability that Anthony will be late  …………… | **(2)** |
| **4.**  **M** | The diagram shows two spinners:    a) Draw a sample space to show all the possible totals when you spin the  two spinners together.  Spinner B   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | | Spinner A |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |   b) What is the probability of obtaining a total 8? …………… | **(2)**  **(1)** |
|  | **TOTAL** | **(10)** |