YEAR 8 HOMEWORK ASSESSMENT TEST 2 – NO CALCULATOR Core 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.**  **S** | **Choose** one of the units below to **complete these sentences**.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | mm2 | km | cm | inches | cm2 | mm |   a) The **perimeter** of a **square** of side 5 mm is 20 ………………  b) The **area** of a rectangle 10 cm long and 4 cm wide is 40 ……………… | **(1)**  **(1)** |
| **2.** | Find the **area** of these shapes. (Diagrams not to scale) |  |
| **F** | 11 cm  4 cm  Area = ……………………… cm2 | **(1)** |
|  | 4 cm  7 cm  5 cm  Area = ……………………… cm2 | **(1)** |
|  | 12 cm  6 cm  Area = ……………………… cm2 | **(2)** |
|  | 60 mm  8cm  9.5 cm  Area = ……………………… cm2 | **(2)** |
| **3.**  **M** | Find the **area** of this shape. Show all of your working   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  | 5 cm |  |  | |  | |  |  |  |  |  | |  | |  |  |  |  | 5 cm | |  | | 7 cm |  |  |  |  | 3 cm | | |  |  |  |  |  |  | | |  |  |  |  |  |  | |     Area = ……………………… cm2 | **(2)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Ratio and Proportion** |  |
| **1.**  **S** | Write the ratio 12 : 30 in its **simplest form** ………………………… | **(2)** |
| **2.**  **F** | Grace and Jack **share** £160 in the ratio 3 : 5  Work out the amount of money that **Jack** gets.  ………………………… | **(3)** |
| **3.**  **F** | Viennese Chocolate Fingers Complete the ingredients Makes **16** to make **8** fingers   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Butter | 200g |  | Butter |  | | Icing sugar | 150g |  | Icing sugar |  | | Self raising flour | 160g |  | Self raising flour |  | | Cornflour | 23g |  | Cornflour |  | | Dark Chocolate | 400g |  | Dark Chocolate |  | | **(3)** |
| **4.**  **F** | an00790_4 books cost £14.  a) How much will **1 book** cost? ………………………………………………  b) How much will **3 books** cost?  ……………………………………………… | **(1)**  **(1)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Sequences** |  |
| **1.**  **S** | Write down the missing numbers in these sequences.  c) 13, 10 , 7 , 4, \_\_\_\_\_, \_\_\_\_\_  d) 1.5 , 1.8 , 2.1, \_\_\_\_\_, \_\_\_\_\_  f) \_\_\_\_\_ , 400 , 100 , 25 , \_\_\_\_\_ | **(1)**  **(1)**  **(1)** |
| **2.**  **F** | The nth term of a sequence is **T(n) = 3n – 2**  The **first term** in the sequence is 3 x **1** – 2 = 1  a) Write down the **next four terms** of the sequence.  \_\_1\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ | **(2)** |
| **3.**  **M** | Here is a sequence of counters:  SAA1-5  a) Complete this table of results:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Pattern Number | 1 | 2 | 3 | 4 | | Number of counters |  |  |  |  |   b) How many counters are needed for the **twentieth**  pattern? …………  c) Write down a **rule** for the number of counters in the nth pattern.  ……………………………………  d) Which pattern will have **88 counters**?  …………………………………… | **(1)**  **(1)**  **(2)**  **(1)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Probability** |  |
| **1.**  **S** | Choose from the words **impossible unlikely evens likely certain** Christmas Day will be the 20th of December. …………………………  Getting a number less than 7 on an ordinary dice. ………………………… | **(2)** |
| **2.**  **F** | Adela has a bag of **14 chocolates**.  6 of the chocolates are **dark**, 1 is **milk** and 7 are **white**.  Adela selects one of the chocolates at random.  Work out the probability that the chocolate is:  a) dark ……… b) not white ………  c) a sugared almond ……… d) either dark or milk. ……… | **(4)** |
| **3.**  **F** | Fifteen balls numbered from 1 to 15 are placed in a bag.  If I pick one ball, what is the probability that the number is:  EAD1-3  a) An **even** number ……………  b) A **factor** of 8 …………… | **(2)** |
| **4.**  **M** | A bag contains red, blue and green balls.  A ball is selected at random.  The probability of choosing a blue ball is 0.3.  The probability of picking a red ball is ½. What is the probability of choosing a ball that is **not** blue or red.………… | **(2)** |
|  | **TOTAL** | **(10)** |