YEAR 8 HOMEWORK ASSESSMENT TEST 2 – NO CALCULATOR Core Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

|  |  |  |
| --- | --- | --- |
|  | **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 cm4 cmArea = ……………………… cm2 | **(1)** |
|  | 4 cm7 cm5 cmArea = ……………………… cm2 | **(1)** |
|  | 12 cm6 cmArea = ……………………… cm2 | **(2)** |
|  | 60 mm8cm9.5 cmArea = ……………………… 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 : 5Work 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 = 1a) Write down the **next four terms** of the sequence. \_\_1\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_  |  **(2)** |
| **3.****M** | Here is a sequence of counters:SAA1-5a) 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:EAD1-3a) 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)** |