YEAR 7 Review Homework Assessment 2 – Non-calculator Higher

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 3 cm is 12 ………………  b) The **area** of a rectangle 10 cm long and 4 cm wide is 40 ……………… | **(1)**  **(1)** |
| **2.**  **S** | Find the **perimeter** of these shapes:  12.3 cm  4.2 cm Perimeter = ………………………… cm  Perimeter = ………………………… cm | **(2)** |
| **3.**  **F** | Find the **area** of these shapes. (Diagrams not to scale) |  |
|  | 11 cm  3 cm  Area = ……………………… cm2 | **(1)** |
|  | Area = ……………………… cm2  40 mm  6 cm  5 cm | **(1)** |
|  | 12 cm  7cm  Area = ……………………… cm2 | **(2)** |
|  |
| **4.**  **M** | Find the **area** of this shape. Show all of your working   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  | 5 cm |  |  | |  | |  |  |  |  |  | |  | |  |  |  |  | 4 cm | |  | | 7 cm |  |  |  |  | 3 cm | | |  |  |  |  |  |  | | |  |  |  |  |  |  | |     Area = ……………………… cm2 | **(2)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Ratio and Proportion** |  |
| **1.**  **S** | Write the ratio 16 : 30 in its **simplest form** …………………………  Write the ration 18 : 24 in its simplest form ………………………… | **(2)**  **(2)** |
| **2.**  **F** | Grace and Jack **share** £320 in the ratio 3 : 5  Work out the amount of money that **Jack** gets.  ………………………… | **(3)** |
| **3.**  **M** | bd07685_To make green paint **yellow** and **blue** are mixed together  They are mixed in the ratio **1 : 6**  A painter uses **5** litres of **yellow** paint.  How much **blue** paint will he need? …………… | **(1)** |
| **4.**  **M** | an00790_5 books cost £30.  a) How much will **1 book** cost? ………………………………………………  b) How much will **4 books** cost?  ……………………………………………… | **(1)**  **(1)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Sequences** |  |
| **1.**  **S** | Write down the missing numbers in these sequences.  a) 51 , 45, \_\_\_\_\_ , 33 , 27, \_\_\_\_\_ , 15  b) \_\_\_\_\_ , 400 , 100 , 25 , \_\_\_\_\_  c) 1.5 , 1.8 , 2.1, \_\_\_\_\_, \_\_\_\_\_ | **(1)**  **(1)**  **(1)** |
| **3.**  **F** | The nth term of a sequence is **T(n) = 3n – 2**  The **first term** in the sequence is 3 x **1** – 2 = 1  Write down the **next four terms** of the sequence.  \_\_1\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ | **(2)** |
| **4.**  **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** | Here is a probability line.  Clearly mark, using an **arrow and a letter**, the following probabilities.  a) Throwing a tail on a fair coin. Label A  b) Throwing a 5 on a fair die. Label B  c) Throwing a 12 on a fair die. Label C  d) Throwing a number less than 6 on a fair die. Label D | **(4)** |
| **2.**  **M** | Adela has a bag of **14 chocolates**.  6 of the chocolates are **dark**, 3 are **milk** and 5 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.**  **M** | Fourteen balls numbered from 1 to 14 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 12 …………… | **(2)** |
|  | **TOTAL** | **(10)** |