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 |

|  |  |  |
| --- | --- | --- |
|  | **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 cm4.2 cm Perimeter = ………………………… cm Perimeter = ………………………… cm  |  **(2)** |
| **3.****F** | Find the **area** of these shapes. (Diagrams not to scale) |  |
|  | 11 cm3 cm Area = ……………………… cm2 |  **(1)** |
|  |  Area = ……………………… cm240 mm6 cm5 cm |  **(1)** |
|  | 12 cm7cm 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 : 5Work out the amount of money that **Jack** gets.………………………… |  **(3)** |
| **3.****M** | bd07685_To make green paint **yellow** and **blue** are mixed togetherThey 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, \_\_\_\_\_ , 15b) \_\_\_\_\_ , 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:SAA1-5a) 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** | 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 Ab) Throwing a 5 on a fair die. Label Bc) Throwing a 12 on a fair die. Label Cd) 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:EAD1-3a) An **even** number ……………b) A **factor** of 12 …………… | **(2)** |
|  | **TOTAL** | **(10)** |