**Year 10 Revision Homework ASSESSMENT 2 CALCULATOR Foundation Standard**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Shape 1 | /15 | Proportion | /10 | Sequences | /10 | Probability | /10 |

|  |  |  |
| --- | --- | --- |
|  | **Area and Perimeter** |  |
| **1.** | Complete the following statements  50 mm = ………………… cm 3 km = ………………… m 520 cm = ………………… m | **(3)** |
| **2.** | Calculate the area and perimeter of the following rectangle:  Perimeter = …………………………  3cm  = …………………………cm  7cm  Area = …………………………    = …………………………cm2 | **(2)** |
| **3.** | On the grid below draw a rectangle with an area of 12cm2 | **(1)** |
| **4.** | Find the area of this triangle.  5cm  6cm …………………………cm2 | **(2)** |
| **5.** | Find the area and perimeter of the compound shape  Image result for compound shapes  Perimeter = …………………………………………    = …………………………cm    Area = …………………………………………    = …………………………cm2 | **(4)** |
| **5.** | Find the area of the trapezium    ……………………… | **(3)** |
|  | **TOTAL** | **15** |

|  |  |  |
| --- | --- | --- |
|  | **Ratio** |  |
| **1.** | Write down the ratio of **shaded** squares to **unshaded**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  |  |   ………………………… | **(1)** |
| **2.** | Simplify the following ratios  a) 10 : 25 b) 12 : 15    ………………………… ………………………… | **(2)** |
| **3.** | The ratio of Y7 students to Y8 students in a club is 5:6  What fraction of the pupils in the club are Y7?  …………………………… | **(1)** |
| **4.** | Red and Blue paint are mixed in the ratio of 3:4 to make a shade of purple.  I have 15 litres of red paint how many litres of blue paint would be need to make the same shade of purple.  …………………………… litres | **(2)** |
| **5.** | Jack and Jill share £30 in the ratio of 2 : 3.  How much does each person get?  Jack = £………………… Jill = £………………… | **(3)** |
| **6.** | Amy is going on holiday to Spain.  The exchange rate is **£1 = €1.27**  She has £200. How many euros will this get her?  **€**…………………………… | **(1)** |
|  |  |  |
|  | **TOTAL** | **10** |

|  |  |  |
| --- | --- | --- |
|  | **Sequences** |  |
| **1.** | Fill in the gaps for the following three sequences:  5, 9, 13, ………, ……… 4, ………, 14, ………, 24 2, 4, 8, 16, ……… , ……… | **(3)** |
| **2.** | Here is a sequence 1, 5, 9, 13 …  Does the number 122 feature in this sequence? Give a reason for your answer:  ……………………………………………………………………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………………………………………… | **(1)** |
| **3.** | Calculate the nth term of the following sequence    5, 8, 11, 14  nth term = ……………………………  Use your nth term to calculate the 50th term  50th term = …………………………… | **(3)** |
| **4.** | Here are the first 4 terms in a Fibonacci sequence. Calculate the next term:  3, 4, 7, 11, ………… | **(1)** |
| **5.** | Calculate the nth term of the following sequence    10, 8, 6, 4 …  nth term = …………………………… | **(2)** |
|  | **TOTAL** | **10** |

|  |  |  |
| --- | --- | --- |
|  | **Probability**  1  2  3  3 |  |
| **1.** | Here is a fair 4-sided spinner.  The spinner can land the numbers 1, 2 or 3  Lucy spins the spinner once.    a) Mark with (A) the probability that the spinner will land on the **number 1**  b) Mark with (B) the probability that the spinner will land on **number 3**  c) Mark with (C) the probability that the spinner will land on an **odd number** | **(3)** |
| **2.** | The following letters are put into a hat.   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **M** | **A** | **T** | **H** | **E** | **M** | **A** | **T** | **I** | **C** | **S** |   Calculate the probability of selecting:   1. A letter H …………… ii. Not a letter M …………… | **(2)** |
| **3.** | Four students take part in a quiz.  The probabilities of them winning are shown in the table below:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Name** | Alice | Bill | Colin | Dave | Eddie | | **Probability** |  | 0.20 | 0.10 | 0.20 | 0.35 |      1. Calculate the probability that Alice will win the quiz: ……………… 2. Calculate the probability that either Eddie or Dave wins the quiz: ……………… | **(2)** |
| **4.** | A spinner with the numbers 1-5 is spun 300 times.  Image result for spinner number 1-5How many times would you expect to spin a number 4?  ……………………… | **(1)** |
| **5.** | 60 people each took a driving test one day.  21 of these people were women.  18 of the 60 people failed their test.  27 of the men passed their test.  Use this information to complete the frequency tree. | **(2)** |
|  | TOTAL | **10** |