YEAR 8 Homework Assessment TEST 2 CALCULATOR ALLOWED 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.** | Find the **area** of these shapes. (Diagrams are not to scale.) |  |
| **S** | 4 cm6cm5cmArea = ……………………… cm2 | **(1)** |
|  | 80mm12cm9.5cmArea = ……………………… cm2 | **(2)** |
|  | 10 cm7 cm12 cmArea = …………………… cm2 |  **(3)** |
| **2.****F** | Find the **area** of this **trapezium**.18 cm8 cm14 cm13 cmArea = …………………… cm 2 |  **(2)** |
| **3.****M** | Here is a circle.The radius of the circle is 4 cm. Work out the circumference of the circle.Give your answer correct to 1 decimal place.   ………………………… cm |  **(2)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  | **Ratio and Proportion** |  |
| **1.****S** | Write the ratio 28 : 36 in its **simplest form**. ………………………… |  **(2)** |
| **2.****S** | A pile of sand has a weight of 180 kg. The sand is put into three different size bags.Small, medium and large in the ratio 2 : 3 : 4Work out the weight of sand in **each bag**.  small bag …………… kg medium bag …………… kg large bag …………… kg |  **(3)** |
| **3.****F** | Nina is going to buy some grass seed. Grass seed is sold in200 g boxes costing £2.30 and in 1 kg boxes costing £10.75Which box of grass seed gives the better value for money?You must show your working  ………………………… |  **(2)** |
| **8.****F** | Margaret goes on holiday to Switzerland.The exchange rate is **£1 = 2.2francs.** She changes **£450** into francs.a) How many **francs** should she get?………………francsIn Switzerland, Margaret buys a railway ticket.The cost of the railway ticket is **88 francs**.b) Work out the cost of the ticket in **pounds**  £…………………… | **(2)****(1)** |
|  | **TOTAL** | **(10)** |
|  |  |  |
|  |  **Sequences** |  |
| **1.****S** | Complete the **first four terms** of the sequences whose **nth term** rules are:a) 4*n* 4, …… , …… , …… rk)b) 5*n* + 3 8 , …… , …… , …… s)c) 7 – 2*n* 5 , …… , …… , …… s) | **(1)****(1)****(1)** |
| **2.****F** | a) Find the **nth term** for this sequence: 2, 8, 14, 20, …………………………b) Calculate the **40th** term in this sequence……………………c) Jodie say “ 134 is in this sequence” Is Jodie correct? You must **explain** your answer. ……………………………………………………………………………………………………………………………………… |  **(2)** **(1)** **(1)** |
| **3.****M** | a) Find the **nth term** for this sequence: 50, 46, 42, 38, …………………………b) Calculate the **40th term** in this sequence …………………… |  **(2)** **(1)** |
|  | **TOTAL** | **(10)** |
|  |  **Probability** |  |
| **1.****S** | EAD1-3Fourteen balls numbered from 1 to 14 are placed in a bag.If I pick one ball, what is the probability that the number is:a) **6** …………… b) A **factor** of 15 ……………c) A **multiple** of 6 …………… | **(3)** |
| **2.****F** | There are 340 pupils in Year 8. There are 125 males.There are 27 boys who wear glasses.There are 17 girls who wear glasses.Use this information to complete this frequency tree.Wears glassesDoes not wear glassesMales340Wears glassesFemalesDoes not wear glasses | **(2)** |
| **3.****F** | Each day, Anthony travels to work. He can be: on time, early, or late.The probability that he will be **on time is 0.3 .** The probability that he will be **early is 0.58**. Work out the probability that Anthony will be **late**. …………… | **(2)** |
| **4.****F** | Lucy and Jessica take a test.The probability that Lucy will pass the test is 0.6The probability that Jessica will pass the test is 0.3Complete the probability tree diagram.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Lucy |  | Jessica | Outcome |
|  |  |  | 0.3 | Pass | ………………… |
|  |  | Pass |  |  |  |
|  | 0.6 |  | ……… | Fail | Pass , Fail |
|  |  |  |  |  |  |
|  |  |  | ……… | Pass | ………………… |
|  | ……… | Fail |  |  |  |
|  |  |  | ……… | Fail | ………………… |

 | **(3)** |
|  | **TOTAL** | **(10)** |