**Year 9 Enhanced: Assessment 3 Revision** Name ……………………………………………

|  |  |  |
| --- | --- | --- |
|  | Topic 1: Probability | **Mark** |
| 1. | The probability that Jess is on time for form is 0.8.  Calculate the probability of her not being on time.  …………………… | **1** |
| 2. | The probability that Tottenham Hotspurs win a game of football is four times the probability that they don’t win.  Work out the probability of them winning.  …………………… | **2** |
| 3. | The probability that Andy is on time for work is 0.7  The probability that Mike is on time for work is 0.5  Calculate the probability that only one of them is on time for work.  …………………… | **3** |
| 4. | Spinner A has the numbers 1,2,3,4,5  Spinner B has the number 3,4,5,6  Both spinners are spun and their totals added.  Calculate the probability of the total being 9.  …………………… | **3** |
| 5. | The ratio of males to females on a trip is 2 : 3  The ratio of students to teachers is 8 : 1  A person is picked at random, calculate the probability of choosing a female student.  …………………… | **3** |
|  |  | **12** |

|  |  |  |
| --- | --- | --- |
|  | Topic 2: Percentages | **Mark** |
| 1. | Boris works 35 hours per week. His hourly wage is £8.90.  He pays tax of 10% on this.  Boris saves 30% of his wage after tax.  He wants to buy a new TV costing £560.  How many weeks does it take him to save enough money to buy his TV?  …………………… | **3** |
| 2. | Fiona invests £4000 in a savings account at 3.2% compound interest per year.  a) How much will she have after 4 years?  ……………………  b) How many years will it take for her investment to reach £5000?  …………………… | **2**  **2** |
| 3. | A dress was £42 in a 30% off sale.  How much was the dress before the sale?  …………………… | **2** |
| 4. | McDonalds increased the price of their Big Mac meal by 15% to £4.89.  Calculate the cost of the Big Mac meal before the increase.  …………………… | **2** |
| 5. | The polar ice cap in the Arctic is 14 metres thick.  If the ice is thinning at a rate of 6% per year, how thick will the ice be in 5 years time?  …………………… | **2** |
|  |  | **13** |

|  |  |  |
| --- | --- | --- |
|  | Topic 3: Similarity and Congruency | **Mark** |
| 1. | The diagram shows two quadrilaterals that are mathematically **similar**.  Angle *SPQ* = angle *DAB.*    a) Calculate the length of *AB*.  ……………………  b) Calculate the length of *PS*.  ……………………  c) Angle PSR is 100o , Jonny thinks that ADC is 250o , explain why Jonny is wrong.  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..  …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….. | **2**  **2**  **1** |
| 2. | *BE* is parallel to *CD*. *AE =* 6 cm,  *ED* = 4 cm,  *AB* = 4.5 cm,  *BE* = 4.8 cm.    a) Calculate the length of *CD*.  ……………………  b) Calculate the perimeter of the trapezium *EBCD*.  …………………… | **2**  **3** |
| 3. | *AB* is parallel to *CD*.  Angle *ACB* = angle *CBD* = 90°.  Prove that triangle *ABC* is congruent to triangle *DCB*.  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………. | **3** |
|  |  | **13** |

|  |  |  |
| --- | --- | --- |
|  | Topic 4: Graphs | **Mark** |
| 1. | A line passes through the points A (-1,4) and B (2,13).  Calculate the gradient of the line AB.  ……………………  Another line passes through the points C (-5, -12) and D (1, 6)  Are the two lines parallel? Explain your answer.  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………. | **2**  **2** |
| 2. | A, B and C are points on a coordinate Grid.  B is the midpoint of the line AC  A is ( 4 ,2) B is (-2,6)  Work out the coordinate of point C.  …………………… | **1** |
| 3. | Calculate the gradient of the line: *3y = 5x + 4*  …………………… | **1** |
| 4. | Here are the equation of a straight line: *3y = 5 – 8x*  a) Write down the value of the gradient.  ……………………  b) Write down the gradient of the line that is perpendicular to the line above.  …………………… | **2**  **1** |
| 5. | Find the equation of the straight line that passes through the points  (-2, 3) and (2, 11).  …………………… | **3** |
|  |  | **12** |