**YEAR 11 Revision HW for TEST 6 Core**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Polygons | /10 | Graphs | /10 | Statistics | /10 | Sim Equations | /10 |

|  |  |  |
| --- | --- | --- |
| Q | Polygons |  |
| 1. | 1. Mark with arrows (>>) a pair of parallel lines.
2. Mark the angle *HCE* with the letter *y*.
 | (2) |
| 2. | Calculate the size of angle *x**x = …………………* | (2) |
| 3. | *ABC* and *DE* are parallel lines. *AEG* and *BEF* are straight lines.Angle *AED* = 54° Angle *FEG* = 70°Work out the size of the angle marked *x*. Give a reason for each stage of your working.  *x = …………………* | (2) |
| 4. | Calcuate the size of an interior and exterior angle in a regaulr octogaonInterior Angle = ……………..⁰ Exterior Angle = ……………..⁰ | (2) |
| 5. | The diagram shows two regular shapes. Work out the size of the angle marked *x*.   *x = …………………* | (2) |
|  | **TOTAL** | **/10** |
|  | Graphs |  |
| 1. | (a)  Complete the table of values for *y* = *x*2 – 4*x* + 2

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *x* | –1 | 0 | 1 | 2 | 3 | 4 | 5 |
| *y* |  | 2 | –1 |  | –1 |  | 7 |

(b) On the grid, draw the graph of *y* = *x*2 – 4*x* + 21. Find estimates of the solutions of the equation *x*2 − 4 *x* + 2 = 0

*x* = .......................... and *x* = ..........................  | (2)(2)(2) |
| 2. | Here is the velocity-time graph of a car for 50 secondsAt what speed was the car travel at 10seconds into the journey? ………………. | (1) |
| 3. | Sketch the graph of y = *x*2 + 5*x* – 14Clearly label all intersections with the *x* and y axis | (3) |
|  | **TOTAL** | **/10** |

|  |  |  |
| --- | --- | --- |
|  | Statistics |  |
| 1. | Nathan wants to find out how many DVDs people have.He writes this question on a questionnaire.How many DVDs do you buy?

|  |  |  |
| --- | --- | --- |
| 0-5 | 5-10 | 10-15 |
|  |  |  |  |  |  |  |  |  |

1. Write down **two** things wrong with this question.
2.
3.
4. Write a better question for Nathan to use on his questionnaire to find out how long his friends spend using the internet.

Nathan is going to ask the students in his maths class to answer his questionnaire.1. This may **not** be a good sample to use.

 Give one reason why.  | (2)(2)(1) |
| 2. | The table shows 60 people’s favourite fruit. Draw a fully labelled pie chart for the data.

|  |  |  |  |
| --- | --- | --- | --- |
|   | Banana | 18 |   |
|   | Apple | 23 |   |
|   | Orange | 9 |   |
|   | Pear | 10 |   |

   | (3) |
| 3. | There are only silver cars, blue cars and red cars in the car parks at Allerton School and at Bragdon School. The pie charts show information about these cars.What fraction of the cars in the car park at Allerton School are blue? Simplify your answer In which car park are there more silver cars? Tick one box to show your answer.Give a reason for your answer:     | (1)(1) |
|  | **TOTAL** | **/10** |

|  |  |  |
| --- | --- | --- |
|  | Simultaneous Equations |  |
| 1. | Solve the simultaneous equations 5*x* + 4*y* = 555*x* + *y* = 25*x* = ……………….. *y* = ……………….. | (2) |
| 2. | Solve the simultaneous equations 3*x* – 4*y* = 132*x* + 3*y* = 3 *x* = ……………….. *y* = ……………….. | (4) |
| 3. | Two families go to a pantomime.The Smith family of two adults and three children pay £69.The Wood family of three adults and five children pay £109.Work out the cost of an adult ticket and the cost of a child ticket. ………………… | (4) |
|  | **TOTAL** | **/10** |