**YEAR 11 TEST 5 REVISION HW CALCULATOR CORE**

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

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| **Transformations** | **/10** | **Inequalities** | **/10** | **Constructions** | **/10** | **Formulae** | **/10** |

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|  | Transformations |  |
| 1. | Reflect shape A in the *y* axis, label this shape B  Reflect shape B in the *x* axis, label this shape C  Describe the single transformation that takes shape A to shape C  ……………………………………………………………………………………………………………………………………………………… | (3) |
| 2. | Rotate triangle P 180° around the point (-1, 1). Label the traingle A  Transalte shape P by the vector . Label the triangle B | (2)  (2) |
| 3. | Describe fully the single transformation that maps shape P onto shape Q  Reflect Shape P in the line x = 1 | (2)  (1) |
|  | **TOTAL** | **10** |

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|  | Inequalities |  |
| 1. | –3 < *x* ≤ 2 *x* is an integer.  Write down all the possible values of *x*  *……………………………………* | (2) |
| 2. | Write down the inequality shown on the number line.    .........................................  Show the inequality *x* > 2 on the number line below. | (2) |
| 3. | –8 ≤ 2*x* < 2 *x* is an integer.  Write down all the possible values of *x*  *……………………………………* | (2) |
| 4. | Solve the inequality 3*x* – 7 < 5 Show your answer on the number | (2) |
| 5. | Solve the inequality 7*x* – 7 < 3 *x* + 13  ………………………………….. | (2) |
|  | **TOTAL** | **10** |

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|  | Constructions and Loci |  |
| 1. | Construct a triangle with sides 7cm, 5cm and 3cm | (2) |
| 2. | The rhombus has a side of length 4 cm.  One angle of the rhombus is 50°.Another angle of the rhombus is 130°.  Use a ruler and a protractor to make an accurate drawing of the rhombus.  4cm | (2) |
| 3. | Use a ruler and a compass to bisect the angle ABC | (2) |
| 4. | ABCD is a rectangle.  Shade the set of points inside the rectangle which are both more than 3 centimetres from the point D and more than 1 centimetre from the line AB.  A  B  D  C | (2) |
| 5. | A trasmitted is to be built.  It must be equidistance from Points A and B and no more than 1.5km away from point C.  Mark the points were the transmitter can be built. Use a scale 1cm : 1km  C  A  B |  |
|  | **TOTAL** | **10** |

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|  | Formulae |  |
| 1. | Make *x* the subject in the formula y = 2*x* + 3  *x* = …………………………… | (2) |
| 2. | Make *b* the subject in the formula *a = b 2- c*  *b* = …………………………… | (2) |
| 3 | Make *r* the subject in the formula  *r* = …………………………… | (2) |
| 4 | If a = 3 b = -2 c = ½ and d = -5  Work out the following  a) 4b2 b) 4d – 3b  = ………………………………… = ………………………………… | (2) |
| 5 | Match the following:   |  |  |  | | --- | --- | --- | | 2 *x* + 3 |  |  | | 6 *x* + 4 *x* = 2 x 5*x* |  | Equation | | *y* = 3 *x* + 5 |  | Identity | | 5 *x* + 3 = 13 |  | Formulae | | 2( *x* + 3) = 2 *x* + 6 |  | Expression | | 4*x* + 3*y* |  |  | | (2) |
|  | **Total** | **/10** |