**Year 11 Higher Standard: Assessment 4 Revision**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Equations** | **/15** | **Volume S.A.** | **/15** | **Sim Eq** | **/8** | **Trigonometry** | **/12** |

|  |  |  |
| --- | --- | --- |
|  | **Topic 1: Equations and rearranging** | **Mark** |
| **1.** | The diagram shows a right-angled triangle.  All the angles are in degrees.  Work out the size of the smallest angle of the triangle.  …………………… | **4** |
| **2.** | Solve  …………………… | **3** |
| **3.** | Solve  …………………… | **3** |
| **4.** | Make *q* the subject of the formula  …………………… | **2** |
| **5.** | Show that when *n* is a whole number 7(2*n* + 1) + 6(*n* + 3)  is always a multiple of 5 | **3** |

|  |  |
| --- | --- |
| *l* |  |
|  |  |

|  |  |  |
| --- | --- | --- |
|  | **Topic 2: Surface area and volume** | **Mark** |
| **1.** | Work out the volume of this cuboid. Give your answer in the form .  ***2x + 1***  ***x - 1***  ***x + 1***  …………………… | **3** |
| **2.** | Find the volume of this triangular prism.  7.5 cm  …………………… cm³ | **3** |
| **3.** | The diameter of a sphere is 10 cm.  Calculate the surface area of the sphere.  Give your answer in terms of π.  …………………… cm² | **2** |
| **4.** | A cone has a base radius of 6 cm and a vertical height of 8 cm.  6 cm  Calculate the curved surface area of the cone.  Give your answer correct to 3 significant figures.  …………………… cm² | **3** |
| **5.** | The diagram shows a solid made from a hemisphere and a cone.  The radius of the hemisphere is 6 cm.  6 cm  15cm  The radius of the base of the cone is 6 cm.  Calculate the volume of the solid.  Give your answer correct to 3 significant figures.  …………………… **cm³** | **4** |

|  |  |  |
| --- | --- | --- |
|  | **Topic 3: Simultaneous equations** | **Mark** |
| **1.** | Solve the simultaneous equations. 2*x* + *y* = 7         3*x* − *y* = -2  *x* = …………………… *y* = …………………… | **2** |
| **2.** | Solve the simultaneous equations 2*x* + 3*y* = 6  3*x* − 2*y* = 22  *x* = …………………… *y* = …………………… | **3** |
| **3.** | Solve the simultaneous equations 3*x* + 7*y* = 26  4*x* + 5*y* =13  *x* = …………………… *y* = …………………… | **3** |

|  |  |  |
| --- | --- | --- |
|  | **Topic 4: Trigonometry** | **Mark** |
| **1.** | *ABC* is a right-angled triangle.  *AB* = 8 cm,  *BC* = 11 cm.  Calculate the size of angle BAC.  Give your answer correct to 1 decimal place.  …………………… | **2** |
| **2.** | Calculate the length of *DE*.  Give your answer correct to three significant figures.  …………………… | **2** |
| **3.** | Here is a parallelogram.  *DC* = 7 cm *CB* = 5 cm  Angle *ABC* is 40°  Work out the area of the parallelogram.  Give your answer correct to 1 decimal place.  …………………… cm² | **3** |
| **4.** | *ABCD* is a trapezium.  *AD* is parallel to *BC*.  Angle *C* = angle *D* = 90° Angle *B* = 50°  *AD* = 5.8 cm. *AB* = 4.3 cm    Calculate the area of the trapezium.  Give your answer to one decimal place.  …………………… cm² | **5** |