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

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

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|  | **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 $\frac{3x - 8}{4} =2x+3$  …………………… | **3** |
| **3.** | Solve $\frac{2x + 5}{4}=\frac{2x - 1}{3}$        …………………… | **3** |
| **4.** | Make *q* the subject of the formula   $r=\frac{2q - 4}{3}$…………………… | **2** |
| **5.** | Show that when *n* is a whole number 7(2*n* + 1) + 6(*n* + 3)  is always a multiple of 5  | **3** |

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| $$Volume of Cone= \frac{πr^{2}h}{3}$$$$Curved surface area of cone=πrl$$ | $$Volume of sphere= \frac{4πr^{3}}{3}$$$$Surface area of sphere=4πr^{2}$$ |

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|  | **Topic 2: Surface area and volume** | **Mark** |
| **1.** | Work out the volume of this cuboid.Give your answer in the form $ax^{3}+bx^{2}+cx+d$.***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 cmCalculate 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 cm15cmThe 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** |

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|  | **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** |

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|  | **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** |