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| Year 8 | | *Area of Plane Shapes* | Non Calculator  Section |
| **Skills and Knowledge Assessed:**   * Find ~~perimeters and~~ areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196) * Investigate the relationship between features of circles such as ~~circumference,~~ area, radius and diameter. Use formulas to solve problems involving ~~circumference and~~ area (ACMMG197) * Choose appropriate units of measurement for area ~~and volume~~ and convert from one unit to another (ACMMG195) * Establish the formulas for areas of rectangles, triangles and parallelograms and use these in problem solving (ACMMG159) | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Answer all questions in the spaces provided on this test paper by:  *Writing the answer in the box provided.*  or  *Shading in the bubble for the correct answer from the four choices provided.*  Show any working out on the test paper.Calculators are **not** allowed. | | | |
|  | A square field has an area of 36 m2.  What is the length of the sides of the field? | | |
|  | What is the area of this rectangle?  28 m2  36 m2  48 m2  64 m2 | | |
|  | Find the area of this triangle.  70 m2  140 m2  210 m2  280 m2 | | |
|  | The shaded shape is drawn on 1 cm grid.  What is the area of the shape? | | |
|  | What is the area of this shape?  26 m2  53 m2  82 m2  83 m2 | | |
|  | How many square millimetres are there in a square metre?  1 000  10 000  100 000  1 000 000 | | |
|  | What is the area of the parallelogram shown?  100 m2  130 m2  200 m2  260 m2 | | |
|  | What is the area of this kite?  1 800 cm2  2 400 cm2  3 600 cm2  7 200 cm2 | | |
|  | What is the area of the trapezium? | | |
|  | A photo frame is in the shape of a rhombus.  What is its area? | | |
|  | What is the area of a circle with radius 12 cm? | | |
|  | Find the area of the plot of land which is shaded (to the nearest tenth of a hectare).  (1 ha = 10 000 m2) | | |
|  | What is the area of this sector of a circle? | | |
|  | A trapezoidal wall, has a banner in the shape of a kite hanging on it as shown.  What area of the wall is visible? | | |
|  | The rear wall of a storage shed is in the shape shown.  What is the area of the wall (in terms of  )? | | |

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| Year 8 | | *Area of Plane Shapes* | Calculator Allowed  Short Answer  Section |
|  | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Answer all questions in the spaces provided on this test paper by:  *Writing the answer in the box provided.*  or  *Shading in the bubble for the correct answer from the four choices provided.*  Show any working out on this test paper. Calculators are allowed. | | | |
|  | What is the area of the square shown? | | |
|  | Find the area of this rectangle. | | |
|  | What is the area of the triangle? | | |
|  | *ABCD* is a parallelogram.  What is its area in square metres? | | |
|  | What is the area of the shaded section between the two squares? | | |
|  | Two blocks of land are shown.  The area of Block A is 2 hectares.  What is the area of Block B in hectares? | | |
|  | What is the area of this rhombus?  225 cm2  325 cm2  430 cm2  450 cm2 | | |
|  | A trapezium has the dimensions shown.    What is its area?  266 cm2  304 cm2  570 cm2  1 140 cm2 | | |
|  | A window in a building is in the shape of a kite with the dimensions shown.    What is the area of the window? | | |
|  | What is the area of the circle shown?  Answer to the nearest cm2. | | |
|  | Find the area of this semicircle, correct to 1 decimal place.  77.0 cm2  88.0 cm2  153.9 cm2  307.9 cm2 | | |
|  | What is the area of the quadrilateral?  272 m2  544 m2  823 m2  1 088 m2 | | |
|  | What is the area between the two circles?  Answer to the nearest square centimetre. | | |
|  | The trapezium shown has an area of 450 cm2.  The perpendicular height is *x* cm.  What is the value of *x*? | | |
|  | A rectangular garden which measures 30 m by 40 m has flower beds which surround a lawn which is an irregular quadrilateral.  What is the area of the lawn? | | |

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| Year 8 | | *Area of Plane Shapes* | Non Calculator  Section |
| ANSWERS | | | |
| No. | WORKING | | ANSWER |
|  |  | | 6 m |
|  |  | | 3rd answer |
|  |  | | 2nd answer |
|  | 2 rows of 7 and 3 rows of 3 = | | 23 cm2 |
|  |  | | 4th answer |
|  |  | | 4th answer |
|  |  | | 3rd answer |
|  |  | | 1st answer |
|  |  | | 160 cm2 |
|  |  | | 160 cm2 |
|  |  | | 4th Answer |
|  |  | | 4.2 Ha |
|  |  | | 2nd answer |
|  |  | | 88 cm2 |
|  |  | | 1st answer |

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| Year 8 | | *Area of Plane Shapes* | Calculator Allowed  Short Answer  Section | |
| ANSWERS | | | | |
| No. | WORKING | | | ANSWER |
|  |  | | | 17.64 cm2 |
|  |  | | | 4th answer |
|  |  | | | 420 m2 |
|  |  | | | 3rd Answer |
|  |  | | | 2nd answer |
|  |  | | | 5 hectares |
|  |  | | | 1st answer |
|  |  | | | 3rd answer |
|  |  | | | 18 750 cm2  Or 1.875 m2 |
|  |  | | | 707 cm2 |
|  |  | | | 1st answer |
|  |  | | | 2nd answer |
|  |  | | | 191 cm2 |
|  |  | | |  |
|  |  | | | 591 m2 |