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| Year  9 | | *Area of Plane Shapes* | Non Calculator |
| **Skills and Knowledge Assessed:**   * Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196) * Calculate the areas of composite shapes (ACMMG216 | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Section 1Short Answer Section | | | |
| Write all working and answers in the spaces provided on this test paper. | | | |
|  | What is the area of the square shown?  ……………………………………………..  ……………………………………………. | | |
|  | What is the area of this rectangle?  ……………………………………………..  ……………………………………………. | | |
|  | What is the area of the triangle?  ……………………………………………..  …………………………………………….  …………………………………………….. | | |
|  | What is the area of the rhombus?  ……………………………………………..  …………………………………………….  …………………………………………….. | | |
|  | What is the area of the triangle?  ……………………………………………..  …………………………………………….  …………………………………………….. | | |
|  | What is the area of the trapezium?  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | What is the area of the parallelogram shown?  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | Andrew builds a kite from sticks and fabric in the dimensions shown.  What area of fabric is needed?  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | What is the area of the shape shown?  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | A circle has an area of 48 m2.  Give an approximation for its radius.  ……………………………………………..…………………………………………….  ……………………………………………..…………………………………………….. | | |
|  | Find the area of this semicircle in terms of    ……………………………………………..  …………………………………………….  …………………………………………….. | | |
|  | A warning sign is in the shape of an arrow made up of two parallelograms, as shown.  The length of one edge of the sign is 2.4 m and it has an area of 3.6 m2.  What is the width of the sign (marked *w*)?  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | A rectangular garden which measures 20 m by 30 m has flower beds which surround a diamond shaped lawn.  What is the area of flower beds?  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | Find the area of the plot of land which is shaded (to the nearest tenth of a hectare).  ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |
|  | What is the area of this shape?    ……………………………………………..  …………………………………………….  ……………………………………………..  …………………………………………….. | | |

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| Year  9 | | *Area of Plane Shapes* | Calculator Allowed |
| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Section 2Multiple Choice Section | | | |
| Mark all your answers on the accompanying multiple choice answer sheet, not on this test paper. You may do any working out on this test paper. Calculators are allowed for this section. | | | |
|  | Find the area of this rectangle.  A. 46 cm2  B. 60 cm2  C. 90 cm2  D. 120 cm2 | | |
|  | Questions 2 and 3 refer to the following:  A rectangular block of land measures 200 m by 250 m. | | |
|  | What is its area in square metres?  A. 900 m2  B. 5 000 m2  C. 50 000 m2  D. 500 000 m2 | | |
|  | What is the area of the block of land in hectares?  A. 0.5 ha  B. 5 ha  C. 50 ha  D. 90 ha | | |
|  | A square field has an area of 3 136 m2.  What is the length of the sides of the field?  A. 56 m  B. 84 m  C. 112 m  D. 784 m | | |
|  | Find the area of this triangle.  A. 28 cm2  B. 36 cm2  C. 96 cm2  D. 192 cm2 | | |
|  | What is the area or the rhombus?  A. 80 cm2  B. 160 cm2  C. 320 cm2  D. 480 cm2 | | |
|  | A trapezium has the dimensions shown.  What is its area?  A. 45 cm2  B. 90 cm2  C. 180 cm2  D. 360 cm2 | | |
|  | The circular plate has a diameter of 18 cm.  What is its area?  A. 254 cm2  B. 381 cm2  C. 509 cm2  D. 1 018 cm2 | | |
|  | What is the area of this shape?  A. 38 m2  B. 172 m2  C. 188 m2  D. 252 m2 | | |
|  | How many square metres are there in a square kilometre?  A. 1 000 m2  B. 10 000 m2  C. 100 000 m2  D. 1000 000 m2 | | |
|  | What is the area of the quadrilateral?  A. 150 m2  B. 192 m2  C. 264 m2  D. 384 m2 | | |
|  | What is the area between the two circles (in terms of  )?  A.  cm2  B.  cm2  C.  cm2  D.  cm2 | | |
|  | What is the area of this sector of a circle (correct to one decimal place)?  A. 56.5 cm2  B. 113.1 cm2  C. 226.2 cm2  D. 453.4 cm2 | | |
|  | The rear wall of a chapel is in the shape shown.  What is the area of the wall (correct to two decimal places)?  A. 62.34 m2  B. 124.69 m2  C. 130.38 m2  D. 192.73 m2 | | |
|  | Kayleigh designs a shape for part of a sculpture. The shape is a trapezium with a kite cut out of it and is made from plywood.  She wants to paint the piece using tubes of paint that cover 2 000 cm2 per tube.  How many tubes will she need to paint the piece of plywood on ***both*** sides?  A. 5 tubes  B. 6 tubes  C. 10 tubes  D. 11 tubes | | |

# Area of Plane Shapes

# Multiple Choice Answer Sheet

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Completely fill the response oval representing the most correct answer.

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D

*Area of Plane Shapes*

# ANSWERS

|  |  |
| --- | --- |
| Section 1 ( 1 mark each) | |
|  | Working and Answers |
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| Section 2 (1 mark each) | | |
|  | Working | Answers |
|  |  | D |
|  |  | C |
|  |  | B |
|  |  | A |
|  |  | C |
|  |  | B |
|  |  | B |
|  |  | A |
|  |  | C |
|  |  | D |
|  |  | B |
|  |  | C |
|  |  | A |
|  |  | C |
|  |  | D |

# Area of Plane Shapes

# Multiple Choice Answer Sheet

Name \_\_\_ Marking Sheet

Completely fill the response oval representing the most correct answer.

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D