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| Year 9 | | *Basic Measurement* | Non Calculator |
| **Skills and Knowledge Assessed:**   * Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195) * 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) * Investigate very small and very large time scales and intervals (ACMMG219) * Express numbers in scientific notation (ACMNA210) | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Section 1** Short Answer Section | | | |
| Write all working and answers in the spaces provided on this test paper. | | | |
|  | Use a ruler to measure the length (longest side) of the shaded rectangle below, to the nearest mm.    ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | A basketball match starts at 7:50pm and lasts for 55 minutes.  What time does it finish?  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | What is the perimeter of this rectangle?  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | The shaded shape is drawn on 1 cm grid.  What is the area of the shape?    …………………………………………  ………………………………………… | | |
|  | What is the area of the triangle?    …………………………………………………  ………………………………………………....  ……………..…………………………………. | | |
|  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Questions 6 – 7 refer to the train timetable below.** | | | | | | Perth Station | 5:23 am | 6:27 am | 6:54 am | 7:08 am | | City West | 5:25 am | 6:29 am | 6:56 am | 7:10 am | | West Leederville | 5:27 am | 6:31 am | 6:58 am | 7:12 am | | Subiaco | 5:29 am | 6:33 am | 7:00 am | 7:14 am | | Daglish | 5:30 am | 6:34 am | 7:01 am | 7:15 am | | Shenton Park | 5:32 am | 6:36 am | 7:03 am | 7:17 am | | Karrakatta | 5:34 am | 6:38 am | 7:05 am | 7:19 am | | Loch Street | 5:35 am | 6:39 am | 7:06 am | 7:20 am | | Claremont | 5:37 am | 6:41 am | 7:08 am | 7:22 am | | Swanbourne | 5:39 am | 6:43 am | 7:10 am |  | | Grant Street | 5:40 am | 6:44 am | 7:11 am |  | | Cottesloe | 5:42 am | 6:46 am | 7:13 am |  | | Mosman Park | 5:44 am | 6:48 am | 7:15 am |  | | Victoria Street | 5:45 am | 6:49 am | 7:16 am |  | | North Fremantle | 5:47 am | 6:51 am | 7:18 am |  | | Fremantle | 5:51 am | 6:55 am | 7:22 am | 7:31 am | | | |
|  | How long does it take to get from Subiaco to Freemantle on the train which leaves at 6:33?  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | Ivy was 12 minutes too late to catch the 5:40 train from Grant St.  How many more minutes must she wait for the next train to arrive to take her to Freemantle?  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | 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?  ………………………………………………  ……………………………………………..  …………………………………………….... | | |
|  | The distance that an airliner has travelled in its service life is given as  Write this distance as a normal numeral.  ………………………………………………………………………………………………. | | |
|  | Hermione weighs a roast before putting it in the oven.  The scale shows it’s mass.    The cooking guide says to cook for 30 minutes per 500 grams.  How long (in hours and minutes) should she cook the roast?    ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | The distance *BC* is 12 cm.  The perimeter of this shape is 132 cm.  What is the distance AB?  ……………………………………………  ……………………………………………  …………………………………………… | | |
|  | Sam is researching pre-history, and finds an event that is estimated to have occurred 240 millennia ago.  If a millennia is a thousand years, write this time in years using scientific notation.  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | | |
|  | The trapezium shown has an area of 450 cm2.  The perpendicular height is *x* cm.  What is the value of *x*?  ………………………………………….…  ……………………………………………….  ……………………………………………… | | |
|  | What is the area of the shaded shape, in terms of  …………………………………………………  …………………………………………………  ………………………………………………....  ………………………………………………… | | |

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| Year 9 | | *Basic Measurement* | Calculator Allowed |
| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Section 2** Multiple 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. | | | |
|  | Which measurement is the same as 6 500 ml?    A. 0.65 litres B. 6.5 litres C. 65 litres D. 0.65 kilolitres | | |
|  | The time on Andrew’s phone is 18:45.  He needs to meet a friend at a quarter past eight to go to a movie.  How much time does he have before they meet?  A. Half an hour B. An hour C. An hour and a half D. 2 hours | | |
|  | What is the area of this shape?  A. 26 m2  B. 53 m2  C. 82 m2  D. 83 m2 | | |
|  | The distance from Earth to Neptune is about 4 290 000 000 km at its’ nearest. What is this in Scientific Notation?  A.  B.  C.  D. | | |
|  | *ABCD* is a parallelogram.  What is its area in square metres?  A.  B.  C.  D. | | |
|  | C:\Users\Garry\Downloads\shutterstock_279343622.jpgMikey stacks 800 bricks which each have a mass of 1.5 kg onto a pallet.  The pallet itself weighs 50 kg.  What is the weight of the full pallet of bricks?    A. 1.25 tonnes B. 1.5 tonnes  C. 12.5 tonnes D. 15 tonnes | | |
|  | Liza went to bed at the time shown on the clock on her wall.  She slept for  hours.  She then took an hour and 20 minutes to get ready for school and get to the bus stop.  What time did she reach the bus stop?  A. 7:20 am.  B. 7:40 am.  C. 8:10 am.  D. 8:20 am. | | |
|  | What is the perimeter of this shape?  A. 68 m  B. 80 m  C. 88 m  D. 100 m | | |
|  | The circle has a diameter of 30 m.  What is its circumference?  A.  B.  C.  D. | | |
|  | What is the area of the parallelogram shown?  A. 100 m2  B. 130 m2  C. 200 m2  D. 260 m2 | | |
|  | Su Lyn uses 120 g of flour, 3 eggs and 20 ml of milk to make one chocolate cake.  She wants to make a lot of cakes for the school market day.  She has plenty of eggs and flour but only has 2 litres of milk.  How much flour will she need to make all of the cakes that she can?  A. 2 kg B. 4 kg C. 6 kg D. 12 kg | | |
|  | What is the perimeter of the polygon shown?  A. 147 m  B. 159 m  C. 161 m  D. 165 m | | |
|  | A sheet of artist’s paper has an area of 0.8 m2.  It is to be cut into pieces which have an area of 500 square centimetres.  Assuming there is no wastage, how many pieces could be cut from the sheet?  A. 8 B. 16 C. 32 D. 400 | | |
|  | What is the area of this sector of a circle?    A.  B.  C.  D. | | |
|  | The Earths pre-history is denoted in Eras as shown in the table below.   |  |  | | --- | --- | | Era | Time frame | | Cenozoic | 66 million years ago to present day | | Mesozoic | 252.17 to 66 million years ago | | Paleozoic | 541 to 252.17 million years ago | | Neoproterozoic | 1,000 to 541 million years ago | | Mesoproterozoic | 1,600 to 1,000 million years ago | | Paleoproterozoic | 2,500 to 1,600 million years ago | | Neoarchean | 2,800 to 2,500 million years ago | | Mesoarchean | 3,200 to 2,800 million years ago | | Paleoarchean | 3,600 to 3,200 million years ago | | Eoarchean | 4,000 to 3,600 million years ago |   How long did the Paleoproterozoic Era last?  A.  B.  C.  D. | | |

*Multiple Choice Answer Sheet*

*Basic Measurement*

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

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| Year 9 | | *Basic Measurement* | Non Calculator |
| **Section 1** Short Answer Section | | | |
| ANSWERS | | | |
| No. | WORKING | | ANSWER |
|  | Width is 8.5 cm or 85 mm. | | 8.5 cm or 85 mm |
|  |  | | 8:45 pm |
|  |  | | 80 m |
|  | Counting gives 28.5 cm2 | | 28.5 cm2 |
|  |  | | 420 m2 |
|  | 6:33 to 6:55 =27+14 = 22 minutes | | 41 minutes |
|  | If she was 12 min late she arrived at 5:52  Time from 5:52 to 6:44 = 8 min + 44 min = 52 min | | 52 minutes |
|  |  | | 5 hectares |
|  |  | | 225 cm2 |
|  |  | | 62 000 000 km |
|  | 30 min per 500 g = | | 2 hours and 24 minutes |
|  |  | | 9 cm |
|  |  | |  |
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| Year 9 | | *Basic Measurement* | Calculator Allowed | |
| **Section 2** Multiple Choice Section | | | | |
| ANSWERS | | | | |
| No. | WORKING | | | ANSWER |
|  |  | | | B |
|  |  | | | C |
|  |  | | | D |
|  | 4 290 000 000 = | | | A |
|  |  | | | C |
|  |  | | | A |
|  |  | | | A |
|  |  | | | D |
|  |  | | | B |
|  |  | | | C |
|  | She uses 20 ml of milk for each and has 2 L = 2000 ml.  Number of cakes =  Amount of flour needed | | | D |
|  |  | | | A |
|  |  | | | B |
|  |  | | | B |
|  |  | | | C |

*Multiple Choice Answer Sheet*

*Basic Measurement*

Name \_\_\_\_\_\_\_ANSWERS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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