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| Year  10 | | Geometric Reasoning Practice Test | | Non Calculator |
| Short Answer Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Write all working and answers in the spaces provided on this Practice Test paper.  All questions are worth 2 marks. | | | |
| 1. | Find the value of *x*, giving reasons.  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |
| 2. | Find the value of *w*, giving reasons.  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |
| 3. | Find the value of *b*, giving reasons.  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |
| 4. | Find the values of *k* and *l*, giving reasons.  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |
| 5. | Draw a sketch of, and name the quadrilateral which has the following properties.   * Opposite sides are equal. * Opposite sides are parallel. * Diagonals bisect at an angle of 70o.   .  Name ..................................................................... | | | |
| 6. | O is the centre of the circle.  Find the value of *e*, giving reasons.  ......................................................................  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |
| 7. | *UVWX* is a parallelogram.  Explain with reasons why .  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |
| 8. | *DF = HF*  *F* is the centre of the circle.  Explain with reasons why .  ......................................................................  ......................................................................    ......................................................................  ...................................................................... | | | |

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| Year  10 | | Geometric Reasoning Practice Test | | Calculator |
| Multiple Choice Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Mark all your answers on the accompanying multiple choice answer sheet, not on this Practice Test paper. You may do any working out on this Practice Test paper. Calculators are allowed for this section. | | | |
| 1. | Which of the congruence tests is sufficient to prove that  ?  A. Three corresponding sides are equal. (SSS)  B. Two corresponding sides and an included angle are equal. (SAS)  C. Two angles and a corresponding side are equal. (AAS)  D. A right triangle, the hypotenuse and a corresponding side are equal. (RHS) | | | |
| 2. | Which of the congruence tests is sufficient to prove that  ?  A. Three corresponding sides are equal. (SSS)  B. Two corresponding sides and an included angle are equal. (SAS)  C. Two angles and a corresponding side are equal. (AAS)  D. A right triangle, the hypotenuse and a corresponding side are equal. (RHS) | | | |
| 3. | Which of the congruence tests is sufficient to prove that  ?  A. Three corresponding sides are equal. (SSS)  B. Two corresponding sides and an included angle are equal. (SAS)  C. Two angles and a corresponding side are equal. (AAS)  D. A right triangle, the hypotenuse and a corresponding side are equal. (RHS) | | | |
| 4. | Which of the congruence tests is sufficient to prove that  ?  A. Three corresponding sides are equal. (SSS)  B. Two corresponding sides and an included angle are equal. (SAS)  C. Two angles and a corresponding side are equal. (AAS)  D. A right triangle, the hypotenuse and a corresponding side are equal. (RHS) | | | |
| 5. | Which of these statements is **always** true:  A. The sum of two acute angles is an acute angle.  B. The sum of two acute angles is an obtuse angle.  C. The sum of an acute angle and an obtuse angle is an obtuse angle.  D. The sum of two obtuse angles is a reflex angle. | | | |
| 6. | Which of the following is **not** a property of a right isosceles triangle:  A. It has one pair of equal angles.  B. It has an angle sum of 180o.  C. It has all sides equal.  D. It has no obtuse angles. | | | |
| 7. | A quadrilateral *ABCD* has the following properties:  The diagonals are not equal.  The diagonals bisect one another.  The opposite angles are equal.  Which of these names could be used for *ABCD*?  A. Square.  B. Rectangle.  C. Parallelogram.  D. Kite. | | | |
| 8. | What is the size of angle ABE?  A. 30o  B. 70o  C. 80o  D. 110o | | | |

Geometric Reasoning Practice Test

Multiple Choice Section

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

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| Year  9 | | | Geometric Reasoning Practice Test | | Calculator |
| Longer Questions | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Write all working and answers in the spaces provided on this Practice Test paper.  Calculators are allowed for this section. | | | | |
| 1. | (a)  3 marks | Find the size of  giving reasons for each step.  ............................................................  ............................................................  ............................................................  ............................................................  ............................................................ | | | |
| (b)  3 marks | Find the value of *y*, giving reasons for each step.  ............................................................  ............................................................  ............................................................  ............................................................  ............................................................ | | | |
| 2. | a)  3 marks | Given *OP = NL* and  prove that  and hence that *OM = NM* giving reasons for each step.  ............................................................  ............................................................  ............................................................  ............................................................  ............................................................ | | | |
| b)  3 marks | *GHIJ* is a kite with  . Prove that  and hence that *IG* bisects *HJ*, giving reasons for each step.  ............................................................  ............................................................  ............................................................  ............................................................  ............................................................  ............................................................  ............................................................ | | | |