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| Year  8 | Mathematics Test  Transformations and Congruence | **Non Calculator** |
|  | Name |  |

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| **Answer all questions in the spaces provided on this test paper by**  **Writing the answer in the box or on the line provided.**  **or**  **Shading in the bubble for the correct answer from the four choices provided.**  **Show any working out on the test paper.**  **Diagrams are not to scale.** | |
| 1. | The figure *ABCD* could be transformed to the figure  by:  Rotation through 180o***.***  Reflection.  Translation.  Rotation through 90o. |
| 2. | Use geometric instruments to draw the image after *PQRS* is reflected in the line AB. |
| 3. | Figure A is transformed to Figure B by which transformation?  Anticlockwise rotation through 270o***.***  Anticlockwise rotation through 90o***.***  Clockwise rotation through 180o***.***  Clockwise rotation through 90o***.*** |
| 4. | Use geometric instruments to draw the image after *KLMN* when it is translated in the distance and direction of the arrow. |
| 5. | Triangle A is rotated through an angle of 90o clockwise. Which triangle could be the image?  Triangle B.  Triangle C.  Triangle D.  Triangle E. |
| 6. | Use geometric instruments to draw the image after *HIJKL*  is rotated through 90o in a clockwise direction about *G*. |
| 7. | The point E (-4, -2) is translated 7 units upward and then 1 unit to the left. Which point is the image after these two transformations?    A (4, -3)  B (-5, 5)  C (3, 4)  D (-1, 2) |
| 8. | Sketch the image of rectangle *PQRS* after it is translated 6 units to the right and 8 units downward. |
| 9. | Sketch the image of triangle *LMN* after it is rotated through 180o about the origin, O. |
| 10. | Sketch the image of the pentagon *ABCDE* after it is reflected in the line *GH*. |
| 11. | *ABCD* and *A’B’C’D’*  are congruent quadrilaterals. Which statement is not necessarily true?  The matching sides are parallel.  The matching sides are equal.  The matching angles are equal.  The areas are the same. |
| 12. | The two irregular pentagons are congruent.  Complete the following statements.  Side AE matches with side .  Angle D matches with angle . |
| 13. | The two triangles shown are congruent.  Which statement is most correct? |
|  | The abbreviations below are used for congruence tests for triangles in the following questions.  SSS Three sides of one triangle are equal to three corresponding sides of a second triangle.  SAS Two sides and an included angle of one triangle are equal to two corresponding sides and an included angle of a second triangle.  AAS Two angles and a side of one triangle are equal to two angles and a corresponding side of a second triangle.  RHS Two right angled triangles have the hypotenuse equal and one other side equal in length. |
| 14. | Which of the congruence tests could be used to show that .  AAS RHS SAS SSS |
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| 16. | Which of the congruence tests could be used to show that .  AAS RHS SAS SSS |
| 17. | In , *WX =YX* and *M* is the midpoint of *WY*.  Which of the congruence tests could be used to show that .  AAS RHS SAS SSS |
| 18. | *PQRS* is a rectangle.  *QT* = *SW* and *TR* = *WP*.  Which of the congruence tests could **not** be used to show that .  AAS  RHS  SAS  SSS |
| 19. | Complete the congruence proof below: |
| 20. | RSTU is a parallelogram.  Complete the congruence proof below: |

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|  | ANSWERS |  |

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