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| Year  8 | Mathematics Practice Test – Transformations and Congruence | **Calculator Practice Test** |
|  | Name |  |

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| 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 translated in the direction and distance indicated by the arrow. |
| 3. | Triangle A is translated to a new position. Which triangle could be the image?  Triangle B.  Triangle C.  Triangle D.  Triangle E. |
| 4. | Use geometric instruments to draw the image after *KLMN* is reflected in the line *AB*. |
| 5. | Figure A is transformed to Figure B by which transformation?  Anticlockwise rotation through 180o***.***  Anticlockwise rotation through 90o***.***  Clockwise rotation through 180o***.***  Clockwise rotation through 90o***.*** |
| 6. | Use geometric instruments to draw the image after *UVWX* is rotated through 180o in a clockwise direction about *A*. |
| 7. | The point A (3, -4) is translated 7 units to the left and then 6 units directly upward. Which point is the image after these two transformations?    B (-4, -10)  C (9, 3)  D (-3, 3)  E (-4, 2) |
| 8. | Sketch the position of triangle *EFG* after it is reflected in the line *AB*. |
| 9. | Sketch the position of triangle *PQR* after it is rotated clockwise through 90o about the origin O. |
| 10. | Sketch the position of triangle *ABC* after it is translated 5 units to the left and 4 units upward. |
| 11. | *ABCD* is a kite and *AEFC* is a rectangle. Which pair of triangles is not congruent?  Triangle 1 and Triangle 2  Triangle 2 and Triangle 5  Triangle 1 and Triangle 4  Triangle 5 and Triangle 6 |
| 12. | Use a protractor and a ruler to construct a triangle which has sides of 5 cm and 7 cm with an included angle of 40o. |
| 13. | Use a compass and a ruler to construct a triangle which has sides of 4 cm, 6 cm and 8 cm. |
|  | 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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| 18. | Complete the congruence proof below: |
| 19. | Complete the congruence proof below: |
| 20. | Complete the congruence proof below:  O is the centre of the circle and A, B, E and F are points on the circumference. |