Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Parent Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Transformation and Equations Review**

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| 1. Rotate the following quadrilateral 90˚ counterclockwise. Then reflect it across the y-axis. What are the new coordinates of the vertices of the new quadrilateral.A: \_\_\_\_\_\_\_\_\_\_ B: \_\_\_\_\_\_\_\_\_\_C: \_\_\_\_\_\_\_\_\_\_ D: \_\_\_\_\_\_\_\_\_\_ | 2. Reflect the following trapezoid over the x-axis. Then rotate the resulting image 180˚. T: \_\_\_\_\_\_\_\_\_\_ U: \_\_\_\_\_\_\_\_\_\_V: \_\_\_\_\_\_\_\_\_\_ W: \_\_\_\_\_\_\_\_\_\_ |
| 3. Translate the following with the rule: (x - 4, y – 2), then reflect over the y-axis. K: \_\_\_\_\_\_\_\_\_\_ L: \_\_\_\_\_\_\_\_\_\_M: \_\_\_\_\_\_\_\_\_\_ N: \_\_\_\_\_\_\_\_\_ | 4. Translate: E(2, 0), F(5, 1), G(4, 2), H(2, 2) 7 units left and 3 units up; then rotate 90˚ clockwise. E: \_\_\_\_\_\_\_\_\_\_ F: \_\_\_\_\_\_\_\_\_\_G: \_\_\_\_\_\_\_\_\_\_ H: \_\_\_\_\_\_\_\_\_ |
| 6. Write the equations for: the difference of two numbers is 3. Their sum is 13. |
| 7. Quadrilateral with the following vertices: P(–4, 1), Q(–2, 1), R(–2, 3), S(–3, 3) is dilated by a factor of 3 with the origin as the center of dilation. What are the new coordinate points?P: \_\_\_\_\_\_\_\_\_ Q: \_\_\_\_\_\_\_\_\_ R: \_\_\_\_\_\_\_\_\_ S: \_\_\_\_\_\_\_\_\_ |
| 8. Meredith’s school is selling tickets to the spring musical. On the first day of ticket sales the school sold 3 senior citizen tickets and 9 child tickets for a total of $75. The school took in $67 on the second day by selling 8 senior citizen tickets and 5 child tickets. Write the system of equations that you could use to determine the price of one senior citizen ticket and one child ticket? |
| 9. A large pizza at Palanzio’s Pizzeria costs $6.80 plus $0.90 for each topping. The cost of a large cheese pizza at Guido’s Pizza is $7.30 plus $0.65 for each topping. Write the system of equations you could use to find how many toppings need to be added to a large chesse pizza from Palanzio’s Pizzeria and Guido’s Pizza in order for the pizzas to cost the same. |
| \_\_\_\_10. Which series of transformations shows that figures 1 and 2 are similar?A. a 180° rotation of figure 1 about the origin, thena dilation with scale factor $\frac{3}{4}$ centered at (1,–3)B. a 90° clockwise rotation of figure 1 about theorigin, then a dilation with scale factor $\frac{3}{4}$ centered at (4,–3)C. a 180° rotation of figure 1 about the origin, thena dilation with scale factor $\frac{3}{4}$ centered at (4,–3)D. a 90° clockwise rotation of figure 1 about theorigin, then a dilation with scale factor $\frac{3}{4}$ centered at (1,–3) |
| \_\_\_\_11. Rectangle ABCD undergoes a series of transformations to create similar rectangle PQRS as shown below.Which series of transformations could rectangle ABCD have undergone to result in rectangle PQRS ?A. a dilation with a scale factor of $\frac{1}{2}$ and a reflectionacross the x-axisB. a dilation with a scale factor of $\frac{1}{2}$ and a reflectionacross the y-axisC. a dilation with a scale factor of 2 and a reflection across the x-axisD. a dilation with a scale factor of 2 and a reflection across the y-axis |