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| --- | --- |
| 1. What type of transformation moves P(3, -6) to P’(3, 6)?
 | 1. If the result of (x, y)→(x – 2, y + 3) is A’(-5, 2), what is the **pre-image**, of A?
 |
| 1. If P(8, 5) is reflected over the line y = 3 and then translated according to the rule (x, y)→(x – 2, y – 4), what quadrant will P’’ be in? ***(Hint: Quadrant I, Quadrant II, Quadrant III or Quadrant IV)***

[image] | 1. Triangle 1 is transformed as shown in the diagram, resulting in Triangle 2. Triangle 2 is transformed to create Triangle 3. Describe the combination of transformations (1→2→3).

[image] |
| 1. Line segment JK with coordinates J(-1,1),

K(-3, -1) is rotated 90° counterclockwise to produce image J’K’. What transformations of JK would produce the same image J’K’? |  | **6.** A figure is transformed according to the rule (x, y)→(x – 1, y + 4). Describe the transformation that has taken place.  |
| **The graph to the right is used to answer questions 7 and 8.**  |
| **7.** Top picture is pre-image. Rotate 180° |  |  |
| **8.** Top picture is pre-image.  Translate (x, y)→(x – 2, y + 3).  |
| **9.** Given A (5, 6), if A is transformed by the rule (x, y)→(x + 2, y – 8) and then reflected over the x-axis, what is A’’?  |
| **Identify each motion as a translation, reflection or rotation.** |
| **10.**  | **11.**  | **12.**http://www.helpingwithmath.com/images/geometry/transformation04.gif | **13.** http://www.icoachmath.com/image_md/Reflection2.jpg |
| **Perform the given transformations and graph the image on the given graph below.**  |
| **14.** Translate the figure by (x – 1, y + 2)[image] |  **15.** Reflect the figure over the line y = - x.[image] |
| **16.** Rotate 90° clockwise around the origin, then reflect over y = - x. | [image] |
| The vertices of ∆ABC are A(2, 1), B(-1, 2), and C(-1, -1). Three transformations are performed on this triangle. The first is a transformation of the reflection of ∆ABC through the x-axis. Then it is translated left 4 units and down 2 units. Finally, the triangle is rotated 90° counterclockwise. |
| **17.** What is the rule for the **first** transformation? | [image] |
|  18**.** List the coordinates after every transformation: |
| **19.** Graph all of them on the given graph. Don’t forget to label! |