
Online HW 5: Transformations

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Transformations

Short-answer problems about transformations.

Question 1 What is your name?

Question 2 To specify a translation, we need a . Equivalently, we need a magnitude (or length) and a .

Question 3 To specify a rotation, we need a and an (assuming an agreement about the direction of rotation).

Question 4 To specify a reflection, we need a .

Question 5 A transformation that does nothing is called the . (Hint: Two words.)

Sometimes a sequence of transformations can be described as a single translation, rotation, or reflection.

Question 6 What kind of transformation is a translation followed by a translation? Explain. Be sure to consider any special cases.

Question 7 What kind of transformation is a rotation followed by a rotation? Explain. Be sure to consider any special cases.

Question 8 What kind of transformation is a reflection followed by another reflection? Explain. Be sure to consider any special cases.

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Question 9 Will the letter *F* look like an *F* after a reflection? What about after a sequence of two reflections? What about after a sequence of 73 or 124 reflections? Explain your reasoning.

Question 10 How will your answer to the previous problem change if you use a capital *D*? Explain.

Question 11 Given a figure and its image after a translation, how do find the direction and distance of the translation? How many points and images do you need?

Question 12 Given a figure and its image after a reflection, how do you find the line of reflection? How many points and images do you need?

Question 13 Given a figure and its image after a rotation, how do you find the center and the angle of the rotation? How many points and images do you need?
