Name:

Date:

School:

Facilitator:

**8.02 Translations**

Total Points: 44

**Identify which of the figures represent isometries. Write “yes” or “no” in the blank provided.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. | Two rhombi or rhombuses that are not the same size |  | 2. | Two concave octagons that are the same size |
|  |  |  |  |  |
|  |  |  |  |  |
| 3. | Two L-shaped figures that are the same size |  | 4. | Two circles, each surrounded by  eight isosceles triangles to look like suns. The two figures are not the same size. |
|  |  |  |  |  |
|  |  |  |  |  |
| 5. | Two action bubbles like those seen in comic strips. The two figures are not the same size. |  | 6. | Two compass arrows that are the same size |
|  |  |  |  |  |

**Determine the number of units a given figure would be translated using the given notation.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7. | (*x*, *y*) 🡪 (*x* + 7, *y* – 6) |  | 8. | (*x*, *y*) 🡪 (*x* – 9, *y* + 2) |
|  | units  (left/right) |  |  | units  (left/right) |
|  | units  (up/down) |  |  | units  (up/down) |
|  |  |  |  |  |
| 9. | (*x*, *y*) 🡪 (*x* – 11, *y*) |  | 10. | (*x*, *y*) 🡪 (*x* – 8, *y* – 5) |
|  | units  (left/right) |  |  | units  (left/right) |
|  | units  (up/down) |  |  | units  (up/down) |
|  |  |  |  |  |
| 11. | (*x*, *y*) 🡪 (*x* + 13, *y* + 3) |  | 12. | (*x*, *y*) 🡪 (*x*, *y* + 9) |
|  | units  (left/right) |  |  | units  (left/right) |
|  | units  (up/down) |  |  | units  (up/down) |
|  |  |  |  |  |
| 13. | (*x*, *y*) 🡪 (*x* – 14, *y* + 12) |  | 14. | (*x*, *y*) 🡪 (*x*, *y* – 4) |
|  | units  (left/right) |  |  | units  (left/right) |
|  | units  (up/down) |  |  | units  (up/down) |

**Using the figures below, determine the coordinates of the new figure.**

|  |  |  |
| --- | --- | --- |
| 15. | Coordinate plane with two triangles. Triangle B A C has vertices at point A (3,5), point B (1,3) and point C (5,2). Triangle B prime A prime C prime has vertices at point A prime (negative 1, 4), point B prime (negative 3, 2) and point C prime  (1, 1). | *A*(3, 5) → *A’*(,) |
|  | *B*(1, 3) → *B’*(,) |
|  | *C*(5, 2) → *C’*(,) |
|  |  |