Translations, reflections and rotations worksheet – Grade 9

Grade 9 · Mixed level · 20 questions · **Version X5088**

Name: _____ Date: _____ Score: ___ / 20

Scan to check answers + earn stars

Write it like (−3, 5).

Done the worksheet? Scan the code (or enter version X5088 on this skill's page at themathmeridian.com) to check your answers online and earn stars.

1. Point (-6, 3) is reflected in the y-axis. Where does it go?

   Answer: _____

2. Point (-1, 5) is reflected in the line y = x. Where does it go?

   Answer: _____

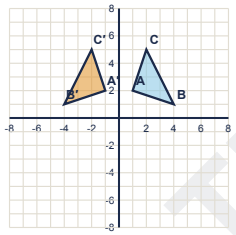
3. Point (4, -4) is reflected in the x-axis. Where does it go?

   Answer: _____

4. A robot at (6, 5) moves 5 right and 1 up. Where is it now?

   A. (1, 6) **B.** (7, 10) **C.** (11, 6) **D.** (11, 4)

5. What transformation maps the blue triangle onto the orange one?



   A. Reflection in the y-axis **B.** Rotation of 90° counterclockwise

   C. Rotation of 90° clockwise **D.** Reflection in the x-axis

   E. Rotation of 180° about the origin

6. A robot at (-3, 1) moves 6 right and 6 down. Where is it now?

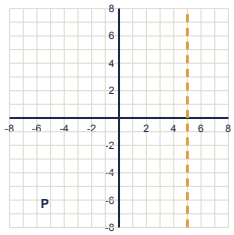
   A. (3, -5) **B.** (-9, -5) **C.** (3, 7) **D.** (-9, 7)

7. A robot at (-2, -2) moves 6 left and 5 down. Where is it now?

   A. (-7, -8) **B.** (4, -7) **C.** (-8, 3) **D.** (-8, -7)

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8. (-6, -7) is reflected in the vertical line x = 5. Where does it go?



Answer: _____

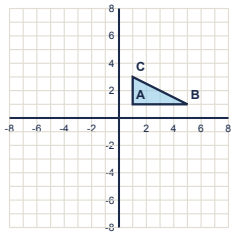
9. (-3, -7) is rotated 180° about the origin, and then rotated 180° about the origin. Where does it end?

Answer: _____

10. (1, -2) is reflected in the x-axis, and then reflected in the y-axis. Where does it end?

Answer: _____

11. Triangle ABC is rotated 180° about the origin. Where does A go?



Answer: _____

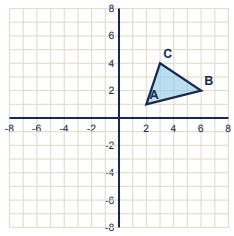
12. (7, -5) is reflected in the line y = x, and then reflected in the x-axis. Where does it end?

Answer: _____

13. (-2, 5) is rotated 90° counterclockwise about the origin, and then reflected in the x-axis. Where does it end?

Answer: _____

14. Triangle ABC is reflected in the line y = x. Where does B go?



Answer: _____

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15. (-1, 6) is rotated 180° about (1, 0). Where does it go?

    Answer: _____

16. Which transformation does NOT keep a shape the same size?

    A. Dilation **B.** Translation **C.** Reflection **D.** Rotation

17. A video game sprite at (4, -4) is translated by (6, 3), then reflected in the y-axis. Where does it end?

    Answer: _____

18. A point is reflected in the x-axis and then in the y-axis. Which single move does the same thing?

    A. Rotation of 180° about the origin **B.** Rotation of 90° clockwise **C.** Reflection in y = x

    D. A translation

19. Reflecting a shape in two parallel lines gives the same result as which single move?

    A. A translation **B.** A rotation **C.** A reflection **D.** A dilation

20. A shape is rotated 90° clockwise four times about the origin. Point (5, 7) ends where?

    Answer: _____

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Answer key · Version X5088

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1. **(6, 3)**
2. **(5, -1)**
3. **(4, 4)**
4. **C ((11, 6))**
5. **A (Reflection in the y-axis)**
6. **A ((3, -5))**
7. **D ((-8, -7))**
8. **(16, -7)**
9. **(-3, -7)**
10. **(-1, 2)**
11. **(-1, -1)**
12. **(-5, -7)**
13. **(-5, 2)**
14. **(2, 6)**
15. **(3, -6)**
16. **A (Dilation)**
17. **(-10, -1)**
18. **A (Rotation of 180° about the origin)**
19. **A (A translation)**
20. **(5, 7)**

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