Year 8 Bearings and Transformations – Mixed Practice

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Year 8 · Maths · Bearings, Coordinates and Transformations · Mixed practice · 30 questions

Name _____ **Date** _____

A. Mixed practice (mixed order)

1. Find the midpoint of the line segment from (6, 2) to (0, −6).

Answer _____

2. A translation maps P (2, −1) to P' (0, 0). Write the translation vector.

Answer _____

3. The bearing of B from A is 035°. Find the bearing of A from B.

Answer _____

4. Find the midpoint of the line segment from (−6, −8) to (8, −4).

Answer _____

5. A translation maps P (−4, 6) to P' (−8, 12). Write the translation vector.

Answer _____

6. Find the midpoint of the line segment from (8, 5) to (6, 1).

Answer _____

7. Point P (5, −1) is translated by the vector (−3, 6) (written as a column vector in your book). Write the coordinates of its image P'.

Answer _____

8. The bearing of B from A is 315°. Find the bearing of A from B.

Answer _____

9. A translation maps P (6, 4) to P' (5, 5). Write the translation vector.

Answer _____

10. The bearing of B from A is 235°. Find the bearing of A from B.

Answer _____

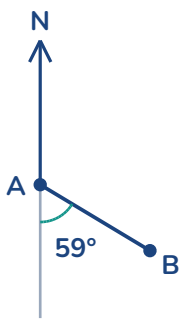
11. Find the midpoint of the line segment from (−7, −5) to (−6, 5).

Answer _____

12. Point P (3, 0) is translated by the vector (−1, 4) (written as a column vector in your book). Write the coordinates of its image P'.

Answer _____

13. The diagram shows the angle between due south and the line AB. B is to the east of the south line. Find the bearing of B from A.



Answer _____

14. The bearing of B from A is 310°. Find the bearing of A from B.

Answer _____

15. Find the midpoint of the line segment from (−2, 4) to (4, 5).

Answer _____

16. The bearing of B from A is 070°. Find the bearing of A from B.

Answer _____

17. The bearing of B from A is 220°. Farah says the bearing of A from B is 400°. Explain the mistake and give the correct bearing.

Answer _____

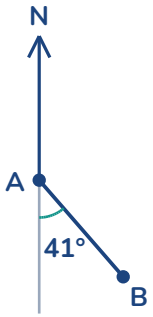
18. A translation maps P (1, −5) to P' (2, −11). Write the translation vector.

Answer _____

19. Find the midpoint of the line segment from (−2, −2) to (1, −3).

Answer _____

20. The diagram shows the angle between due south and the line AB. B is to the east of the south line. Find the bearing of B from A.



Answer _____

21. Find the midpoint of the line segment from (−3, −4) to (1, −7).

Answer _____

22. Dina finds the midpoint of (−6, 6) and (3, −3) by halving the differences and gets (4.5, −4.5). Explain the mistake and find the midpoint.

Answer _____

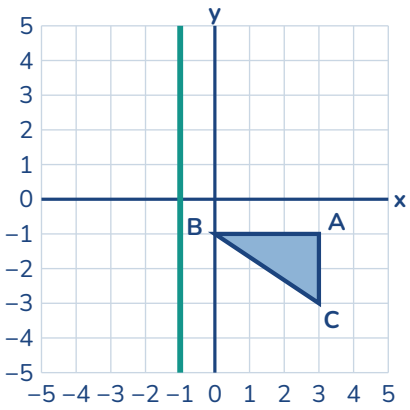
23. Triangle P has corners (2, 3), (2, 1), (3, 1). Triangle Q has corners (3, 2), (1, 2), (1, 3), in the same order. Describe fully the single transformation that maps P onto Q.

Answer _____

24. Eli says reflecting a point in the line y = x swaps its coordinates. Is Eli right? Explain.

Answer _____

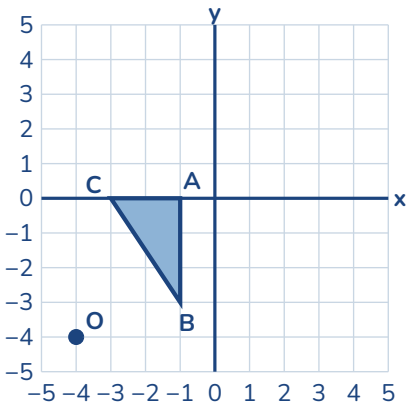
25. Reflect the shape in the line x = −1. Draw the image on the grid and write the coordinates of the image of each labelled corner.



26. Point P (−3, −3) is translated by the vector (−2, −2) (written as a column vector in your book). Write the coordinates of its image P'.

Answer _____

27. Enlarge triangle ABC by scale factor 2 with centre O (−4, −4). Draw the image on the grid and write the coordinates of A', B' and C'.



28. The bearing of B from A is 140°. Find the bearing of A from B.

Answer _____

29. The diagram shows the angle between due south and the line AB. B is to the east of the south line. Find the bearing of B from A.



Answer _____

30. Rotate the shape 90° anticlockwise about the centre R (−2, −1). Draw the image on the grid and write the coordinates of the image of each labelled corner.

