Assignment I (ICSE Class 10 2018)

Gautam Singh (CS21BTECH11018)

Problem 1 (5. c). *Use graph paper for this question (Take 2cm = 1 unit along both x and y axis). ABCD is a quadrilateral whose vertices are A(2,2), B(2,−2), C(0,−1) and D(0,1).*
 (i) *Reflect quadrilateral ABCD on the y-axis and name it as A'B'CD.*
 (ii) *Write down the coordinates of A' and B'.*
 (iii) *Name two points which are invariant under the above reflection.*
 (iv) *Name the polygon A'B'CD.*

Solution:
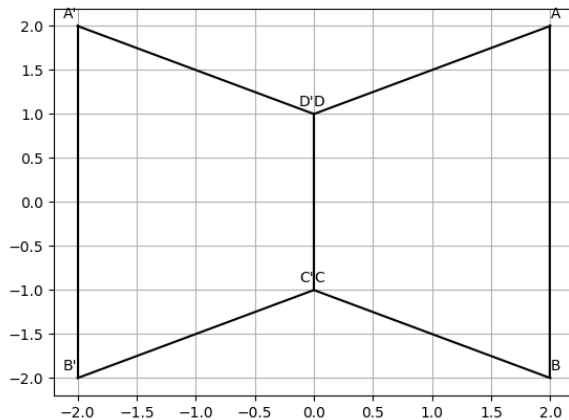 (i) The plot of quadrilateral ABCD after reflection on the *y*-axis is as shown:

Fig. 1: Plot of points A, B, C, D and their reflections in the y-axis.

 (ii) The coordinates of A' and B' are (−2,2) and (−2,−2) respectively.
 (iii) The two points which are invariant under reflection are C(0,−1) and D(0,1).
 (iv) The polygon A'B'CD is an isosceles trapezium.