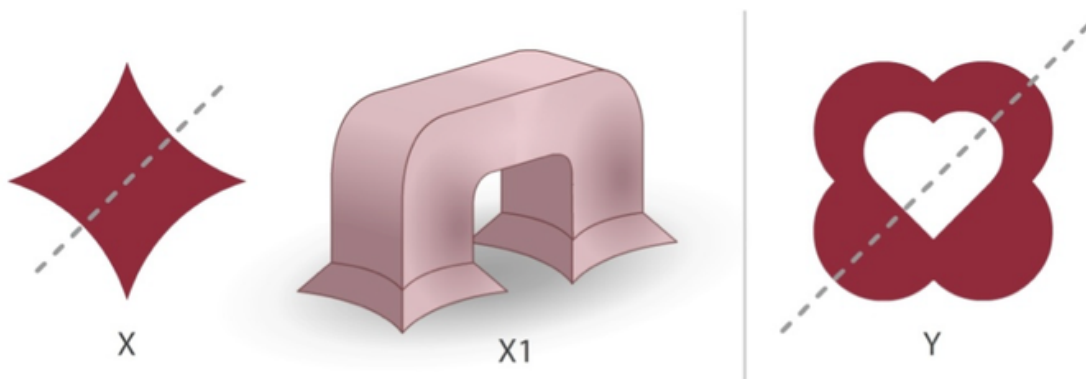
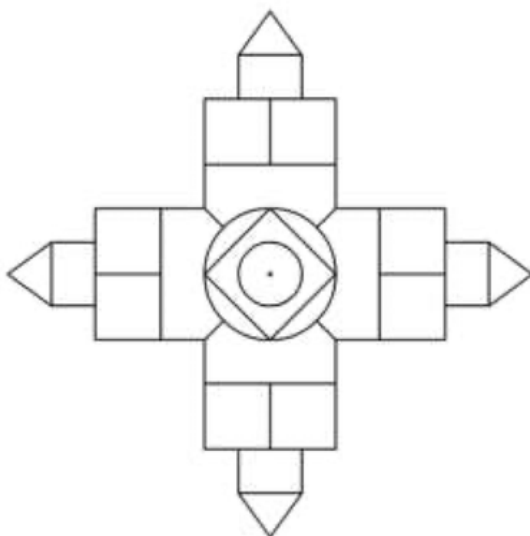


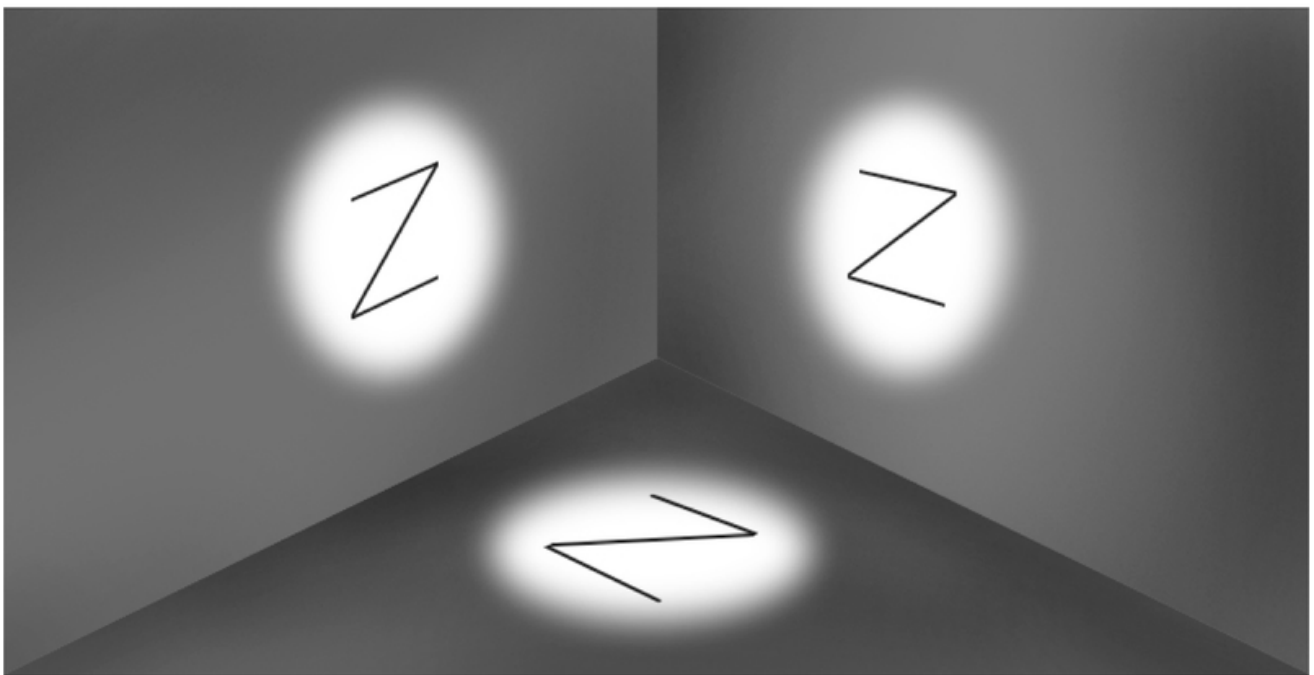
Q0.1 X1 is a 3D form generated from the shape X, using certain 3D operations. It has 14 surfaces in total. The same operations are carried out on shape Y. How many surfaces would the resulting 3D form have?



Q0.2 The front view of a solid object is shown in the image. If the views from all six sides are the same, how many surfaces does it have?



Q0.3 What are the least number of lines required to generate a 3D form such that it creates shadows similar to the figure shown below?



Q0.4 A bank needs to upgrade its ATM kiosks to be wheel-chair accessible. An ATM kiosk entrance has four steps rising up to reach the floor level of the kiosk. Each step is 1000 mm in length, 300 mm in breadth, and 150 mm in height. The bank proposes to create a wheel-chair accessible ramp with a slope of 1:12, adjacent to the steps. What is the minimum horizontal length of the ramp in metre?

Q0.5 Shown below is the view and cross-section of a seat belt used in aeroplanes. Part X has four different components P, Q, R and S. How many springs are required to be fixed on the part S to make the seat belt work?

