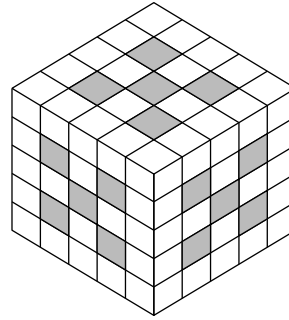


7. A 5 by 5 by 5 cube is made by gluing 1 by 1 by 1 cubes together. Some of these small cubes are then removed by 'drilling' right through the large cube as shown.

How many of the small cubes remain?

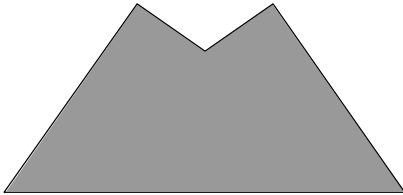


- A 50 B 52 C 60 D 68 E 72

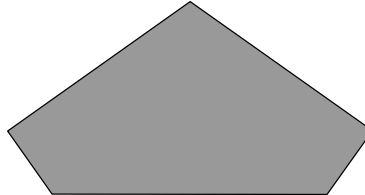
8. Three shapes X, Y and Z are shown below. A sheet of A4 paper (297 mm by 210 mm) is folded once, and placed flat on a table.

Which of these shapes could be made?

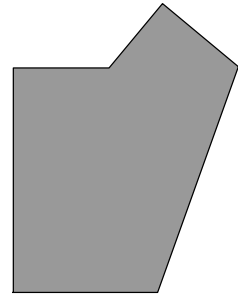
X



Y



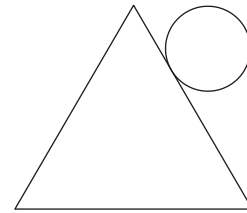
Z



- A Y and Z only B Z and X only C X and Y only
D none of them E all of them

9. The diagram shows a circle with circumference 1 being rolled around an equilateral triangle with sides of length 1.

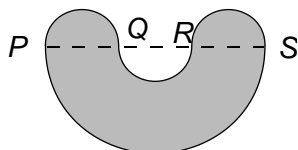
How many complete turns does the circle make as it rolls once around the triangle without slipping?



- A 3 B $3\frac{1}{2}$ C 4 D 5 E $5\frac{1}{2}$

10. The points P , Q , R , S lie in order along a straight line, with $PQ = QR = RS = 2$ cm. Semicircles with diameters PQ , QR , RS and SP join to make the shape shown below.

What, in cm^2 , is the area of the shape?



- A 5π B $9\pi/2$ C 4π D $7\pi/2$ E 3π