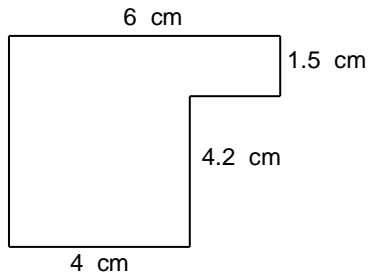


## Perimeter Problems

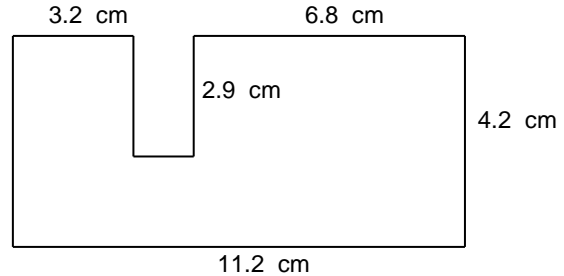
Find the perimeter of each shape. Set out your work clearly.

### Near Genius

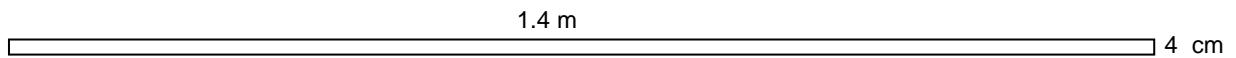
1.



2.

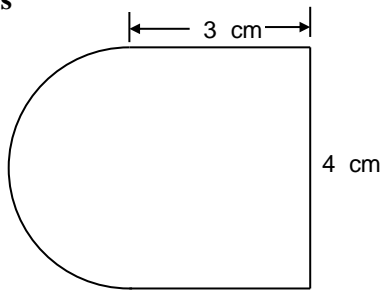


3.

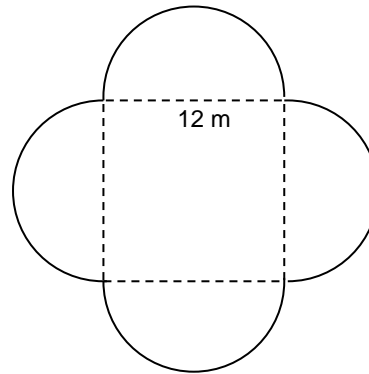


### Genius

4.

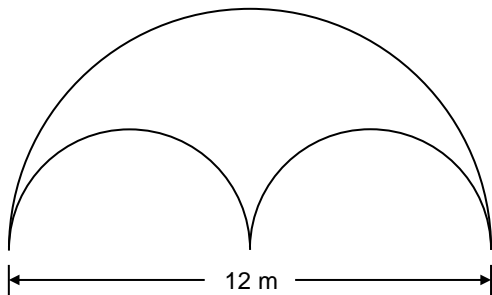


5.

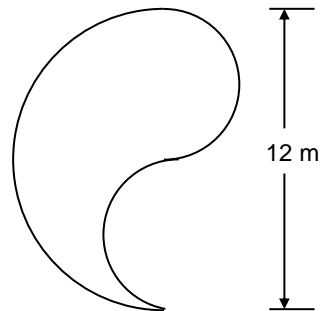


### Super-Genius

6.



7.



### Mega-Genius

8. What a coincidence – the answers to (6) and (7) above are the same! Or is it a coincidence? Explain.

9. The shape alongside consists of one large semi-circle and two small semi-circles. Each small semi-circle is half the diameter of the large semi-circle. The diameter of the small semi-circle is  $d$  units.

Show that the total perimeter of the two small semi-circles is exactly equal to the perimeter of the large semi-circle.

