

$$\begin{aligned}
 \text{Total perimeter} &= 8 + 5 + 8 + 7 + 10.99557429 \\
 &= 38.99557429 \text{ cm} \\
 &= 39.0 \text{ cm (to 3 significant figures)}
 \end{aligned}$$

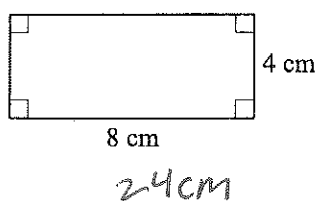


Exercises

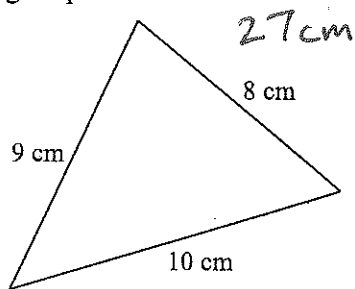
1. Giving your answers correct to 3 significant figures, calculate the *circumference* of a circle with:
- (a) radius 6 m, (b) diameter 15 cm, (c) radius 8 mm.

2. Calculate the *perimeter* of each of the following shapes:

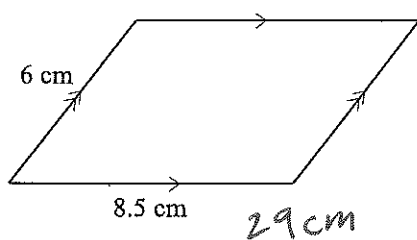
(a)



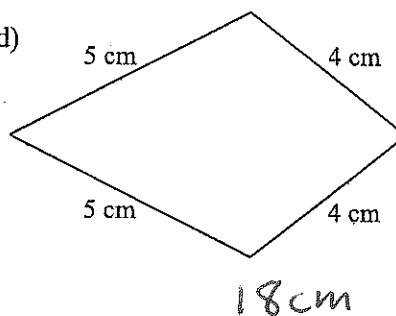
(b)



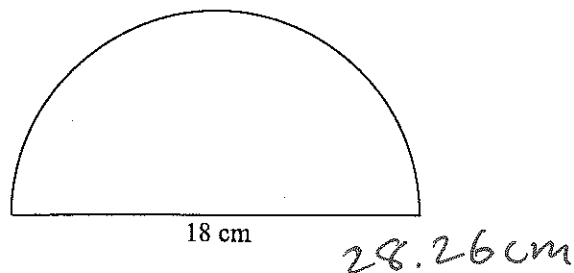
(c)



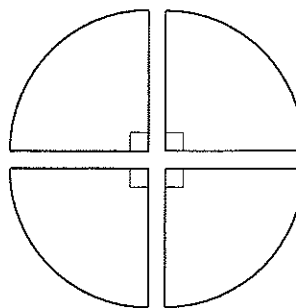
(d)



3. Giving your answer correct to 3 significant figures, calculate the *perimeter* of the semicircle shown.



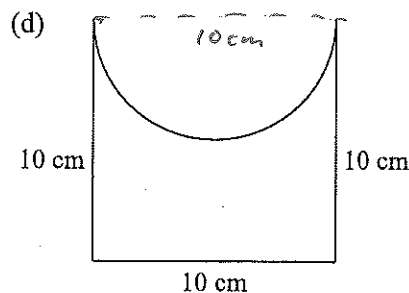
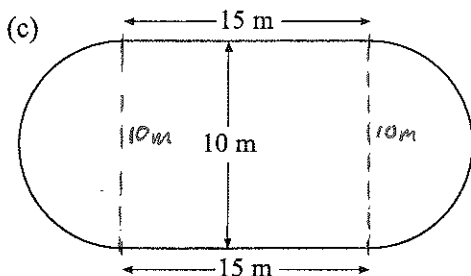
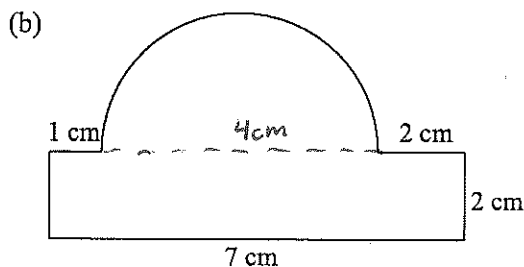
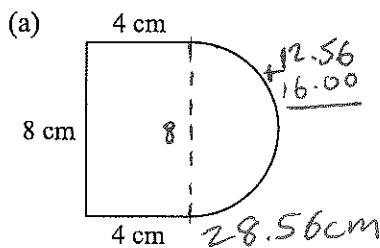
4. A circle of radius 8 cm is cut into four equal parts as shown in the diagram:



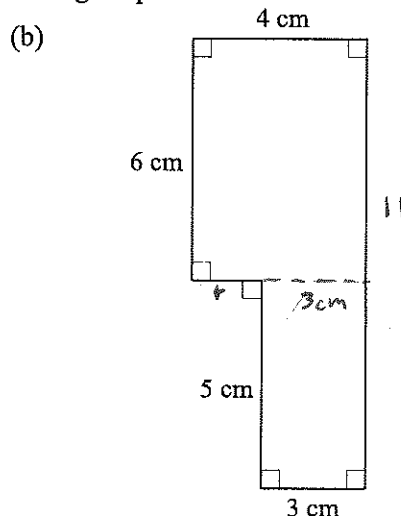
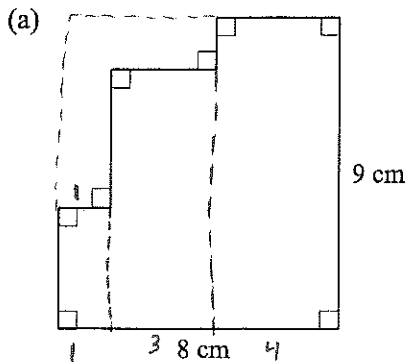
- (a) Calculate the *circumference* of the original circle, giving your answer correct to 2 decimal places. *50.24 cm*
- (b) Calculate the *perimeter* of each of the 4 parts, giving your answers correct to 2 decimal places.

12.56 cm

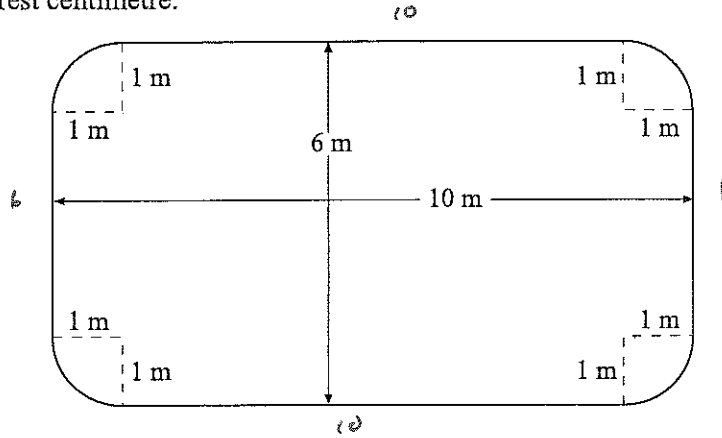
5. Calculate the *perimeter* of each of the following shapes, giving your answers correct to 1 decimal place. The circular parts are either semicircles or quarters of circles.



6. Calculate the *perimeter* of each of the following shapes:

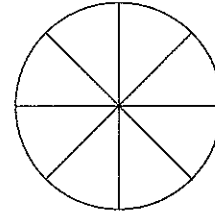


7. A square has an area of 36 m^2 . Calculate its *perimeter*. $A = s^2$ $\sqrt{36} = 6$ $p = 4 \times 6 = 24$
8. Calculate the *perimeter* of this shape, giving your answer correct to the nearest centimetre:

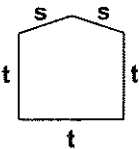


9. A circle of radius 32 cm is cut into 8 equal parts, as shown in the diagram.

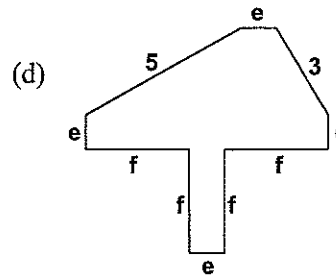
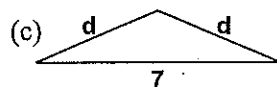
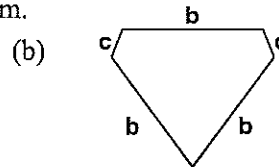
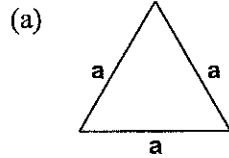
Calculate the *perimeter* of each part, giving your answer correct to the nearest millimetre.



10. The total perimeter of a semicircle is 37 cm. Calculate the *radius* of the semicircle, giving your answer correct to the nearest millimetre.

11.  The perimeter of this shape is $3t + 2s$.
- $p = 3t + 2s$

Write an expression for the perimeters of each of these shapes. Write each expression in its simplest form.



(KS3/95/Ma/3-5/P1)