Take $\pi = 3.14$, or use the π key. Give answers to one decimal place.

1 A shape is made from a rectangle 14 cm by 6 cm with a semicircle on each of the two short ends.

(a) Find the area (3)

(b) Find the perimeter (3)

(6 marks)

2 The shape below is made from a rectangle and **two** quarter circles of radius 4 cm.

The rectangle is 12 cm by 4 cm and a quarter circle sits on each end, curving outwards.

(a) Find the total area (3)

(b) **Two quarter circles make what fraction of a whole circle?** (1)

(4 marks)

3 A compound shape is made from a rectangle and a semicircle. Its total area is 60.6 cm^2. The semicircle has radius 3 cm and sits on the top of the rectangle, which is 6 cm wide.

(a) Find the area of the semicircle (2)

(b) Find the area of the rectangle (1)

(c) **Find the height of the rectangle.** (2)

(5 marks)

4 A window is a rectangle 80 cm wide and 120 cm tall with a semicircle on top. Glass costs $\$0.90$ for every 1000 cm^2.

(a) Find the total area of glass (3)

(b) Find the cost, to the nearest cent (2)

(5 marks)