Take $\pi = 3.14$, or use the π key. Give answers to one decimal place. **Write down the whole, the hole, and the answer – three lines every time.**

1 A circle of radius 3 cm is cut from a rectangle 10 cm by 8 cm. Find the area left.

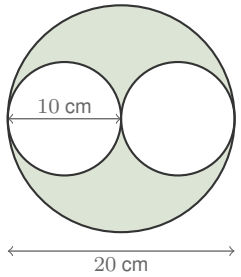
(a) the rectangle (1)

(b) the circle (1)

(c) the area left (1)

(3 marks)

2 A circle of diameter 20 cm has two circles of diameter 10 cm cut from it. Find the shaded area.



(a) the large circle (2)

(b) one small circle (1)

(c) the shaded area (2)

(d) **What fraction of the large circle is shaded?** (1)

(6 marks)

3 A square of side 9 cm has a quarter circle of radius 9 cm removed from one corner. Find the area left.

(a) the square (1)

(b) the quarter circle (2)

(c) the area left (1)

(4 marks)

4 A rectangle 15 cm by 10 cm has a semicircle of radius 5 cm cut from one of its long sides. Find the area left.

(a) the rectangle (1)

(b) the semicircle (2)

(c) the area left (1)

(4 marks)