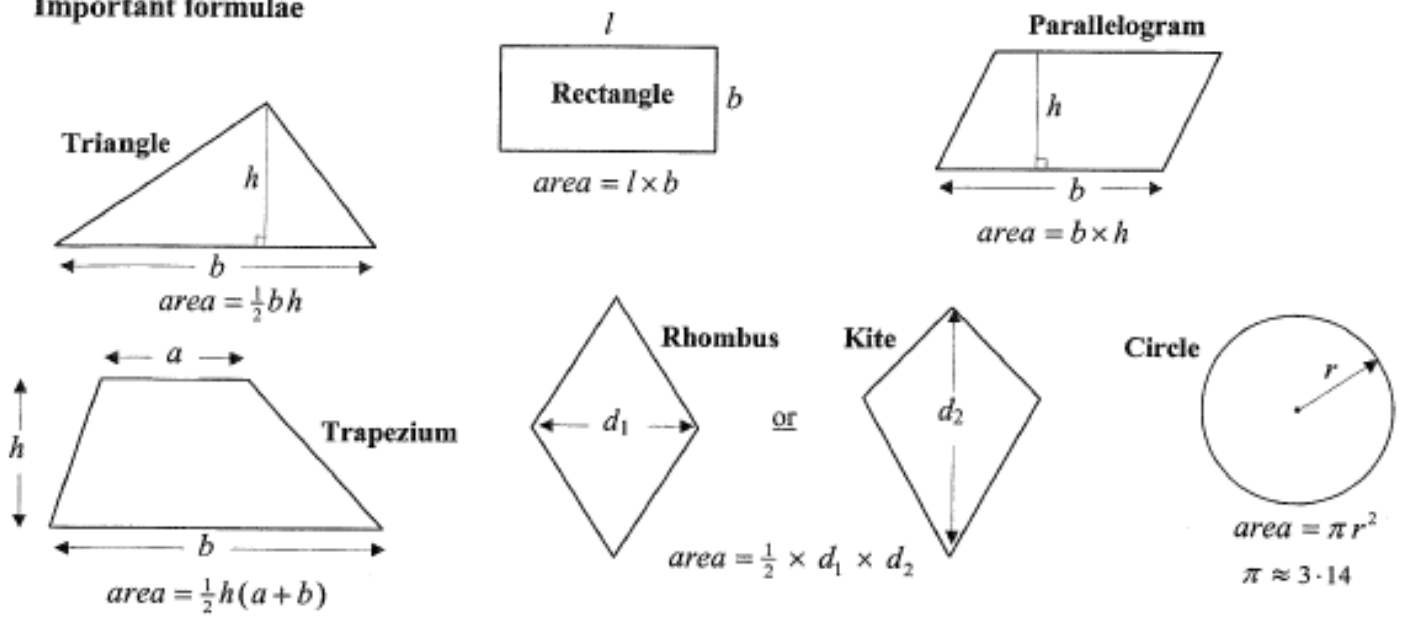
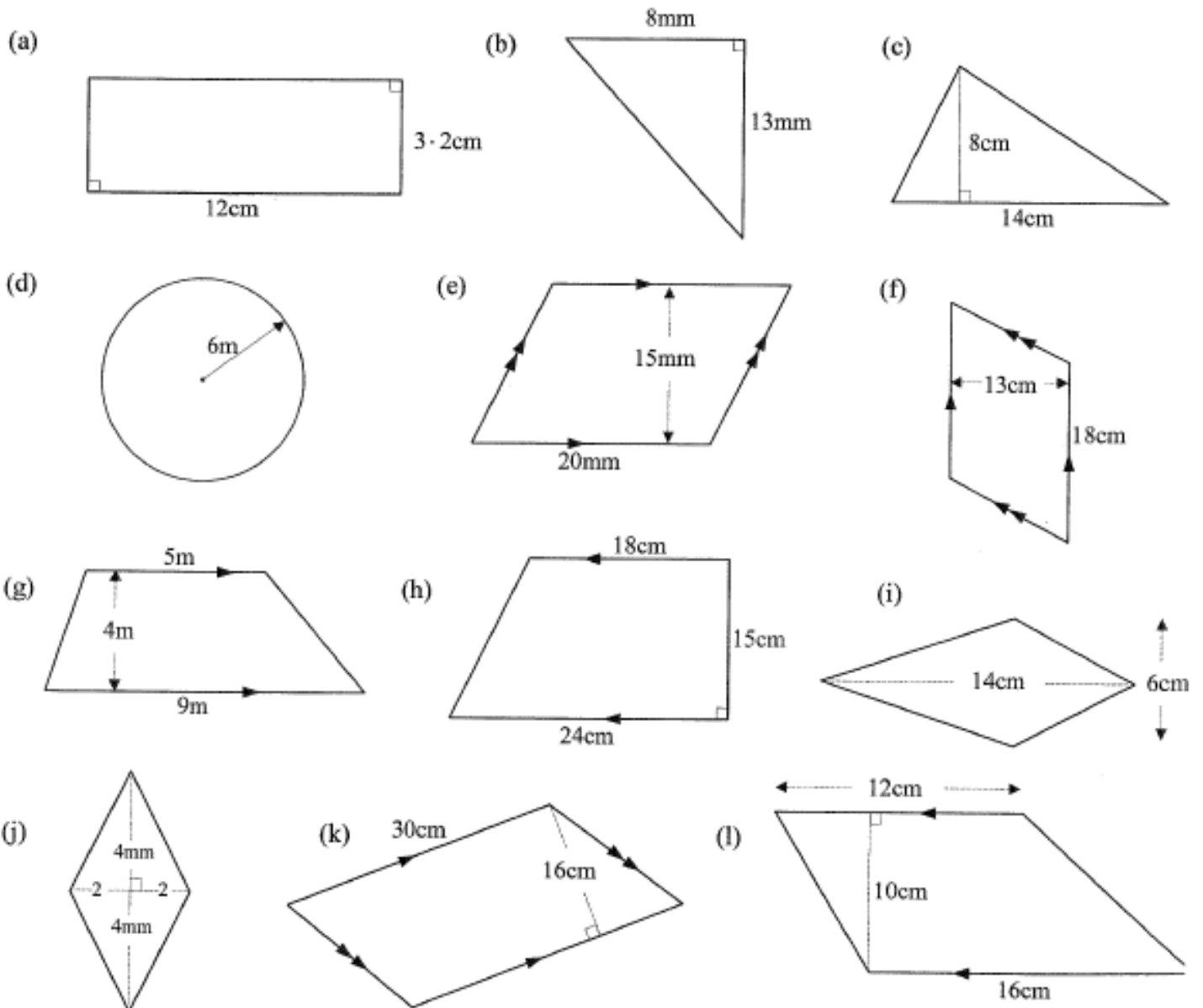


## Area (1)

### Important formulae



Calculate the area of each shape below:



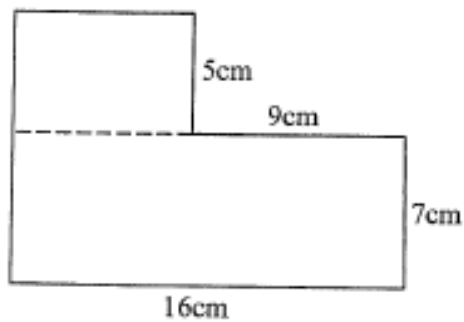
## Area (2)

Calculate the area of each composite shape below:

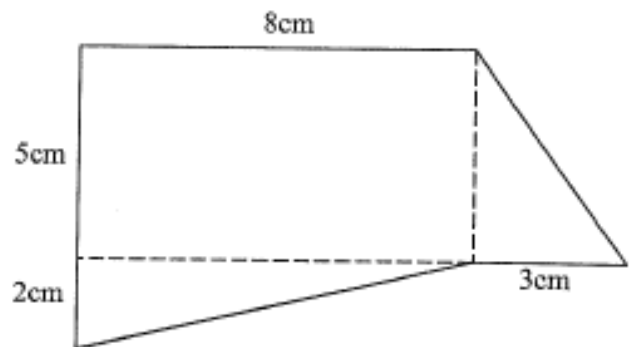
(note.... assume right-angles where obvious)

Round your answers to 1 decimal place where necessary.

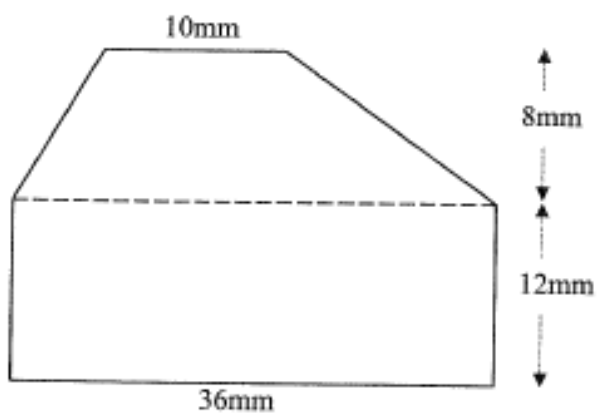
(a)



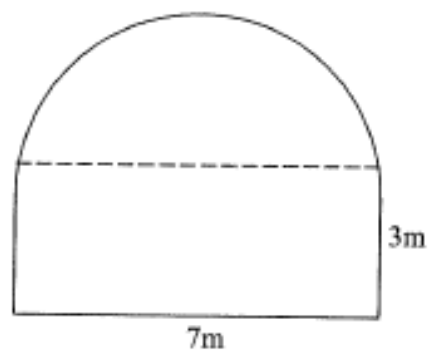
(b)



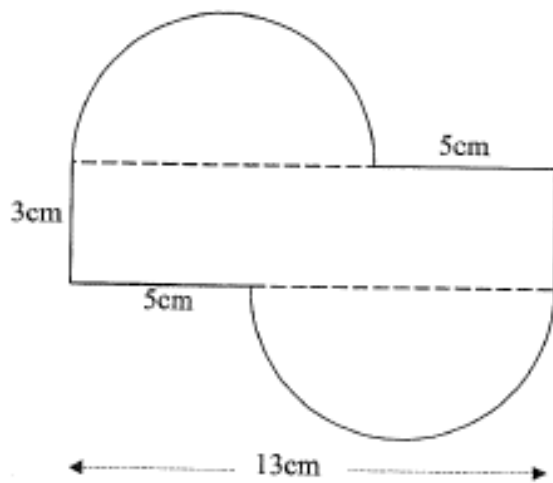
(c)



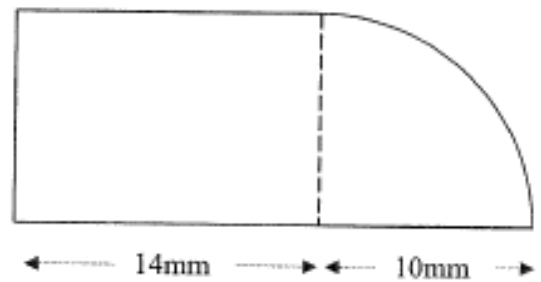
(d)



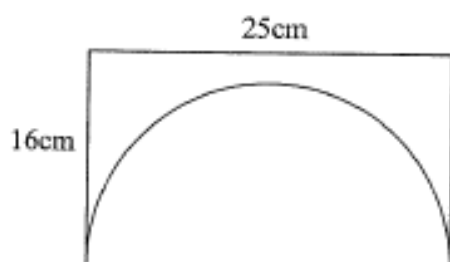
(e)



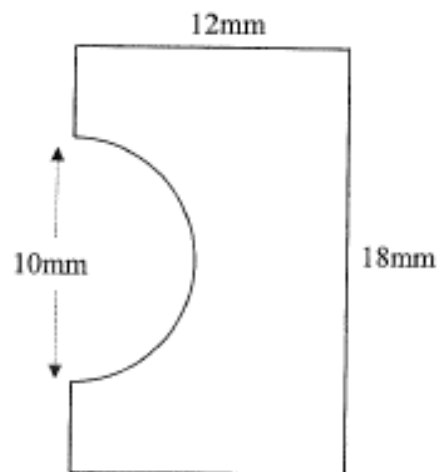
(f)



(g)



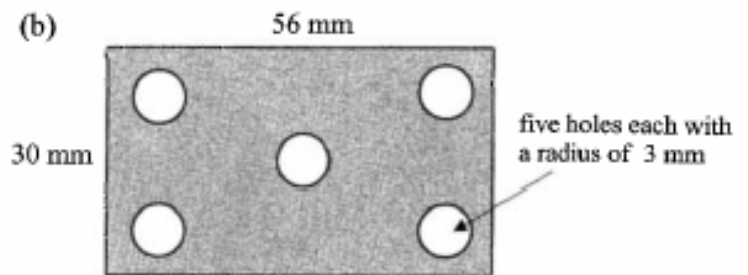
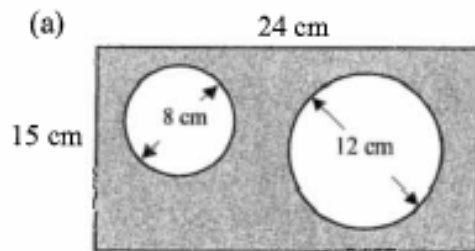
(h)



### Area (3) - Problems

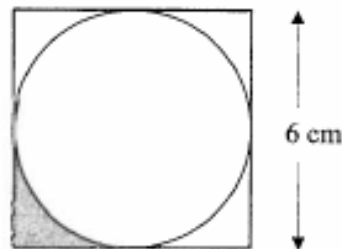
Round your answers to 1 decimal place where necessary.

1. Calculate the shaded area in each diagram below.

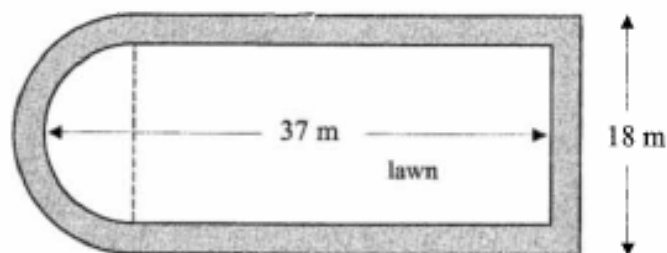


2. A rectangular steel plate measures 40cm by 25cm. Four holes, each with a diameter of 10cm, have been drilled through the plate.
- (a) Calculate the area of metal remaining, after the holes have been drilled.
- (b) What percentage of metal has been wasted?
3. A piece of thin plastic is in the shape of a square of side 18cm.
- (a) Calculate the area of the largest circular hole which can be drilled through the plastic.
- (b) What percentage of the plastic has been lost to create this circular disc?

4. Calculate the shaded area in the diagram opposite.



5. The diagram below shows a lawn (unshaded) surrounded by a path of uniform width (shaded). The curved end of the lawn is a semi-circle of diameter 14 metres.



- (a) Calculate the area of the lawn.
- (b) Calculate the area of the path.
6. A rectangular sheet of metal measures 60cm by 20cm. It is melted down and recast into circular discs of the same thickness as the original sheet and with radius 5cm. How many complete discs can be cast?

### Area 1

- (a)  $38.4 \text{ cm}^2$     (b)  $52 \text{ mm}^2$     (c)  $56 \text{ cm}^2$     (d)  $113.04 \text{ m}^2$   
(e)  $300 \text{ mm}^2$     (f)  $234 \text{ cm}^2$     (g)  $28 \text{ m}^2$     (h)  $315 \text{ cm}^2$   
(i)  $42 \text{ cm}^2$     (j)  $16 \text{ mm}^2$     (k)  $480 \text{ cm}^2$     (l)  $140 \text{ cm}^2$

### Area 2

1.  $147 \text{ cm}^2$                       2.  $55.5 \text{ cm}^2$                       3.  $616 \text{ mm}^2$   
4.  $40.2 \text{ m}^2$                         5.  $89.2 \text{ cm}^2$                       6.  $218.5 \text{ mm}^2$   
7.  $154.7 \text{ cm}^2$                       8.  $176.8 \text{ mm}^2$

### Area 3 - Problems

1. (a)  $196.8 \text{ cm}^2$                       (b)  $1538.7 \text{ mm}^2$   
2. (a)  $686 \text{ cm}^2$                         (b)  $31.4 \%$   
3. (a)  $254.3 \text{ cm}^2$                       (b)  $21.5 \%$   
4.  $1.9 \text{ cm}^2$   
5. (a)  $496.9 \text{ m}^2$                       (b)  $206.3 \text{ m}^2$   
6. 15