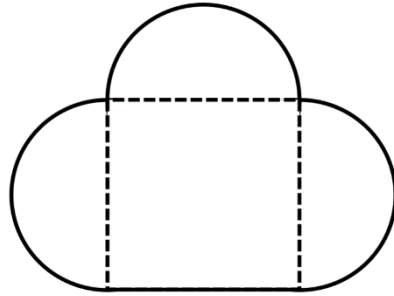


a)
The diagram shows Jane's lawn.
It is in the shape of a square of side 36m
and three semi-circles.

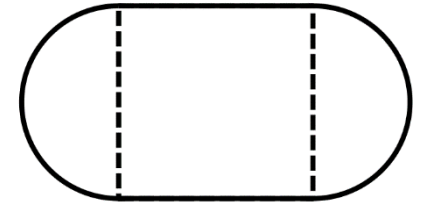


She is going to spread fertiliser on the lawn at a rate of 30g per square metre. The fertiliser is only sold in 10kg bags costing £15.80 each.

Calculate the cost of buying the bags of fertiliser for her lawn.

What is the area of the lawn?	$36 \times 36 = 1296$ $\frac{\pi \times 18^2}{2} \times 3 = 1526.8140296 \dots$ $1296 + 1526.8140296 \dots = 2822.8140296 \dots \text{ m}^2$
How much fertiliser is needed?	$2822.814 \times 30 = 84684.42\text{g}$ $84684.42 \div 1000 = 84.68424\text{kg}$
How many bags of fertiliser does she need to buy?	$84684.42 \div 10 = 8.4684442$ <p>She needs to buy 9 bags</p>
How much does the fertiliser cost?	$9 \times \text{£}15.80 = \text{£}142.20$

b)
The diagram shows Kay's lawn.
It is in the shape of a square of side 30m
and two semi-circles.



She is going to spread fertiliser on the lawn at a rate of 25g per square metre. The fertiliser is only sold in 12kg bags costing £18.50 each.

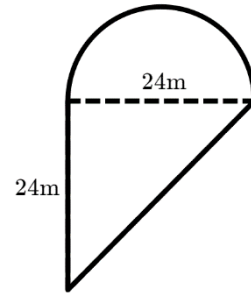
Calculate the cost of buying the bags of fertiliser for her lawn.

What is the area of the lawn?	$30 \times 30 = 900$ $\frac{\pi \times 15^2}{2} \times 2 = 706.8583470 \dots$ $900 + 706.8583470 \dots = 1606.8583470 \dots \text{ m}^2$
How much fertiliser is needed?	$1606.858 \times 25 = 40171.45\text{g}$ $40171.45 \div 1000 = 40.17145\text{kg}$
How many bags of fertiliser does she need to buy?	
How much does the fertiliser cost?	

c)

The diagram shows Leo's lawn.
It is in the shape of a right-angled
isosceles triangle and a semi-circle.

He is going to spread fertiliser on the
lawn at a rate of 40g per square metre.
The fertiliser is only sold in 6kg bags
costing £11.25 each.



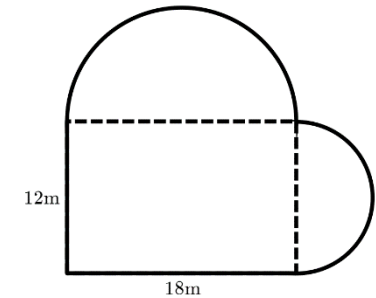
Calculate the cost of buying the bags of fertiliser for his lawn.

What is the area of the lawn?	$\frac{24 \times 24}{2} = 288$ $\frac{\pi \times 12^2}{2} = 226.1946710 \dots$ <p>Total area of the lawn = 514.1946710... m²</p>
How much fertiliser is needed?	
How many bags of fertiliser does she need to buy?	
How much does the fertiliser cost?	

d)

The diagram shows Mark's lawn.
It is in the shape of a rectangle with
dimensions of 12m and 18m, and two
semi-circles.

He is going to spread fertiliser on the
lawn at a rate of 50g per square metre.
The fertiliser is only sold in 8kg bags
costing £13.60 each.



Calculate the cost of buying the bags of fertiliser for his lawn.