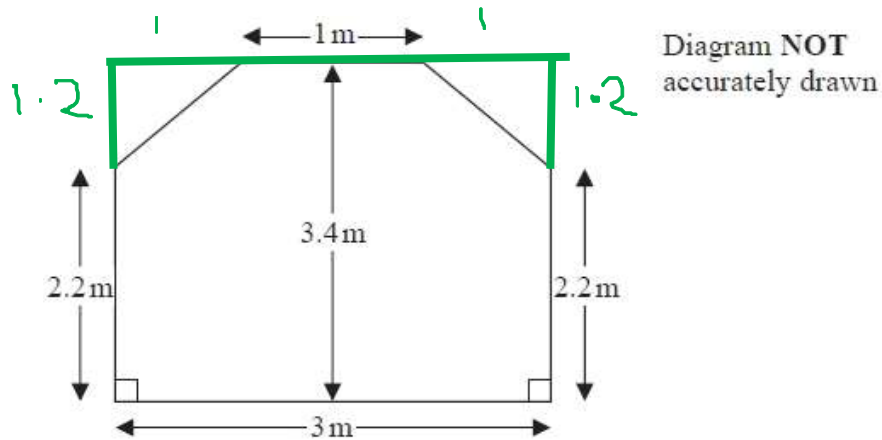


## Questions

\* The diagram shows the floor plan of a conservatory.



Nicole is going to cover the floor with tiles.

The tiles are sold in packs.

One pack of tiles will cover  $2\text{m}^2$

A pack of tiles normally costs £24.80

Mary gets a discount of 25% off the cost of the tiles.

Nicole has £100

Does she have enough money to buy all the tiles she needs?

You must show all your working.

$$\square \text{ Area} = 3 \times 3.4 = 10.2 \text{ m}^2$$

$$\triangle = 1 \times 1.2 \div 2 = 0.6 \text{ m}^2$$

$$\text{Floor area} = 10.2 - 2 \times 0.6 = 9 \text{ m}^2$$

$$\text{Packs needed} = 9 \div 2 = 4.5$$

must buy 5 packs

$$\text{Cost } 5 \times 24.80 = \text{£}124.00$$

$$\text{Discount } \text{£}124 \times 0.25 = \text{£}31.00$$

$$\text{Final cost } 124 - 31$$

(Total for question = 5 marks)

\* The diagram shows the plan of a floor.

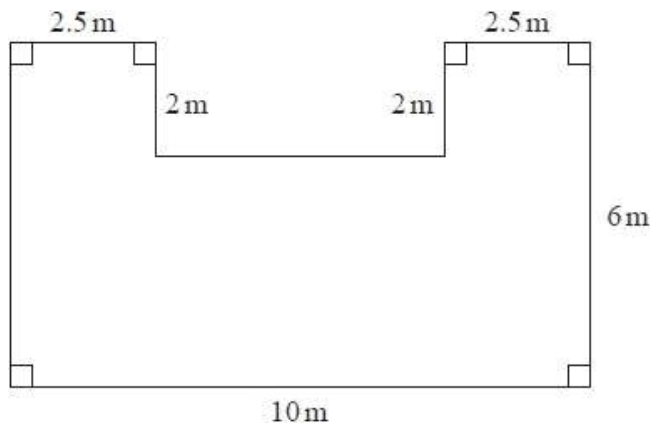


Diagram **NOT**  
accurately drawn

Sophia is going to varnish the floor.

She needs 1 litre of varnish for  $5 \text{ m}^2$  of floor.  
There are 2.5 litres of varnish in each tin of varnish.

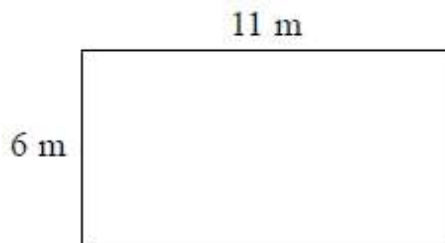
Sophia has 3 tins of varnish.

Does she have enough varnish for all the floor?  
You must show all your working.

**(Total for question = 5 marks)**

A tin of varnish costs £15

A rectangular floor has dimensions 6 m by 11 m.  
The floor is going to be covered in varnish.



Irsa assumes that each tin of this varnish covers an area of  $12 \text{ m}^2$ .

(a) Using Irsa's assumption, work out the cost of buying the varnish for this floor.

£ .....

(4)

Irsa finds that each tin of varnish covers less than  $12 \text{ m}^2$ .

(b) Explain how this might affect the number of tins she needs to buy.

.....  
.....

(1)

**(Total for question = 5 marks)**

\* Here is a diagram of a wall.

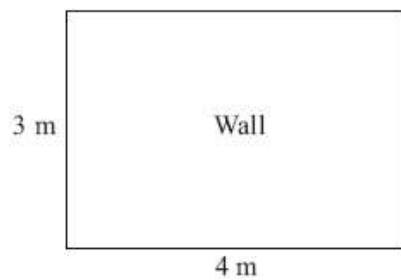
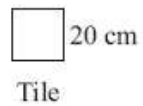


Diagram **NOT**  
accurately drawn



Halima wants to cover all of the wall with tiles.

The tiles are squares with sides of length 20 cm.

The tiles are sold in packs.

There are 10 tiles in each pack.

Each pack of tiles costs £34.99

Halima only has £1000

Can she buy enough packs of tiles to cover the wall?

**(Total for Question is 6 marks)**

\* The diagram shows the floor plan of a dining room.

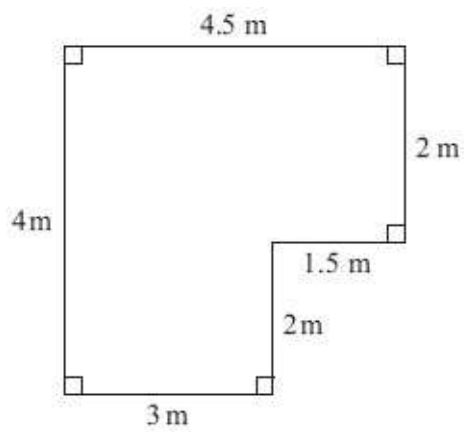


Diagram **NOT**  
accurately drawn

Sahil is going to cover the floor with wooden floorboards.

The floorboards are sold in packs.  
One pack of floorboards will cover  $2.25 \text{ m}^2$ .

Work out how many packs Sahil needs.  
You must show all your working.

**(Total for Question is 4 marks)**

The diagram shows a patio in the shape of a rectangle.

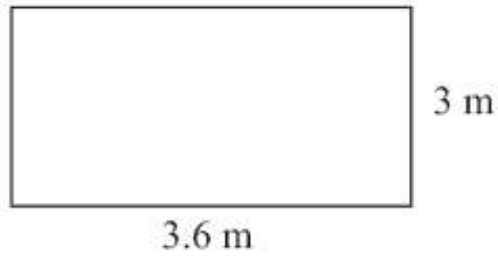


Diagram **NOT** accurately drawn

The patio is 3.6 m long and 3 m wide.

Nathaniel is going to cover the patio with paving slabs. Each paving slab is a square of side 60 cm.

Nathaniel buys 32 of the paving slabs.

(a) Does he buy enough paving slabs to cover the patio? You must show all your working.

.....  
(3)

The paving slabs cost £8.63 each.

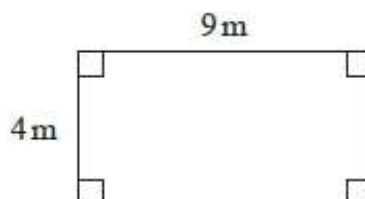
(b) Work out the total cost of the 32 paving slabs.

£.....  
(3)

**(Total for Question is 6 marks)**

Denisa has a garage.

Here is a plan of her garage floor.



Denisa wants to buy enough paint to cover the garage floor as cheaply as possible. She can buy her paint from Decor U or from Paint Store.

|  |
|--|
| <p><b>Decor U</b><br/>Floor paint</p> <p>£3.70 each tin<br/>1 tin covers <math>12\text{m}^2</math></p> |
|--|

|  |
|--|
| <p><b>Paint Store</b><br/>Floor paint</p> <p>£3.00 each tin<br/>1 tin covers <math>10\text{m}^2</math></p> |
|--|

From which of these two shops should Denisa buy her paint?  
You must show all your working.

**(Total for question = 4 marks)**

\*The diagram shows the plan of a small field.

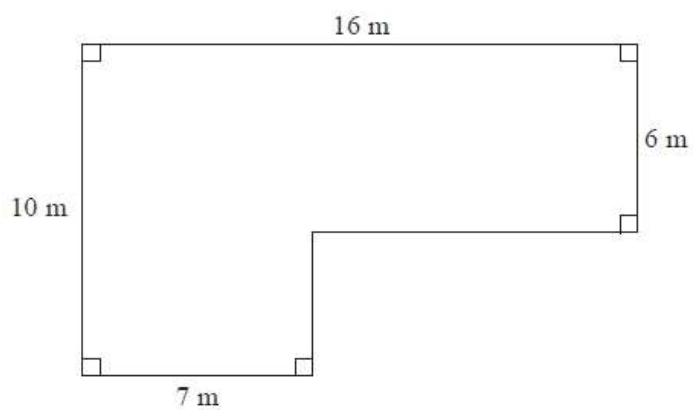


Diagram **NOT**  
accurately drawn

Bailey is going to keep some pigs in the field.  
Each pig needs an area of 36 square metres.

Work out the greatest number of pigs Bailey can keep in the field.

**(Total for Question is 4 marks)**