Problems with area and money

Andy is going to cover a wall with tiles
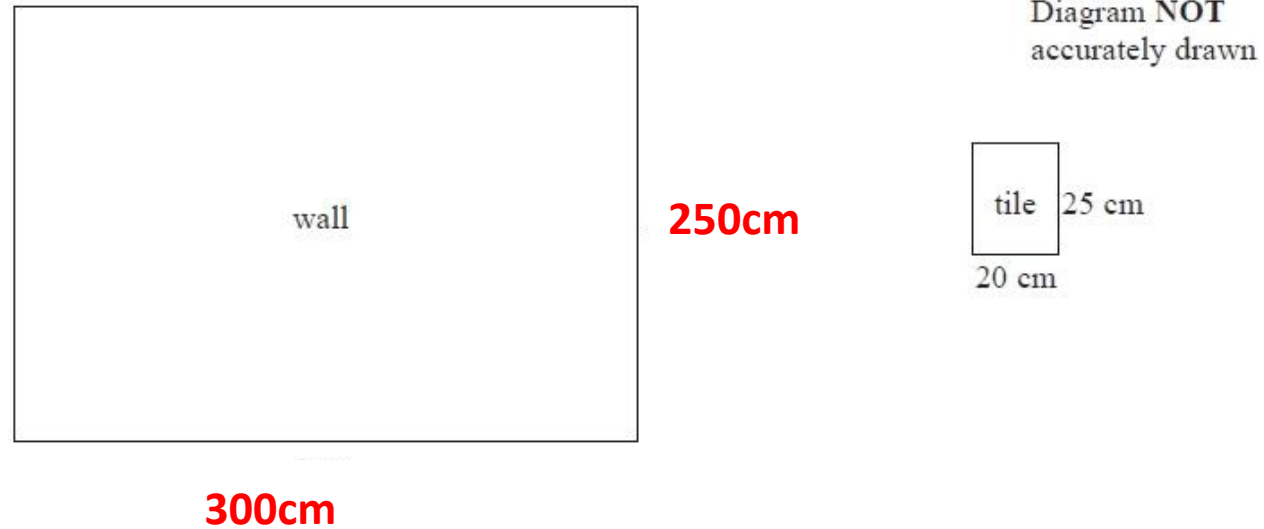
wall   2.5 m

tile 25 cm

20 cm

3 m
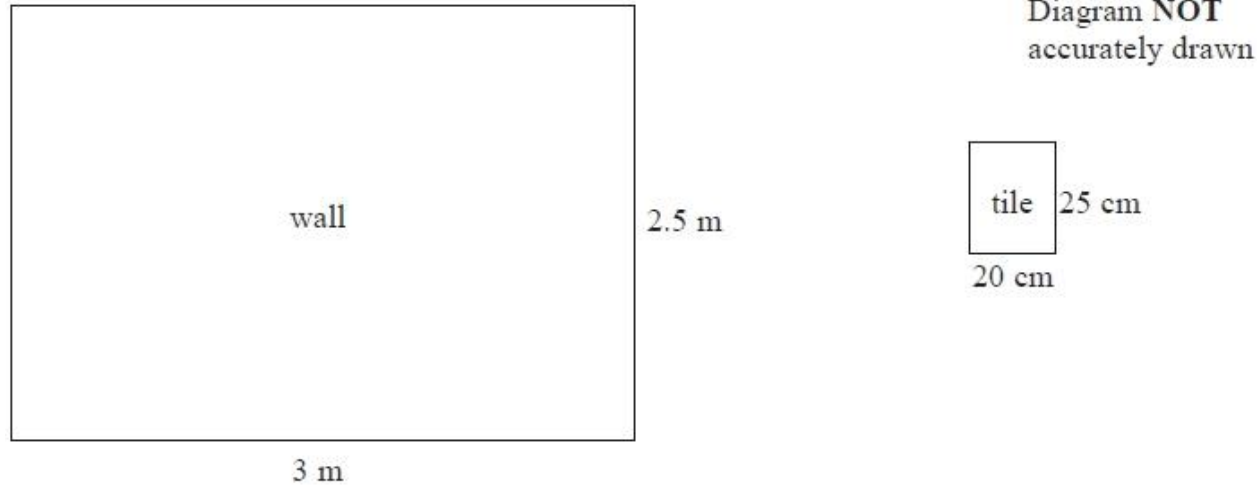
The wall is in the shape of a rectangle which is 3 m wide and 2.5 m high.

The tiles are rectangles 20 cm wide and 25 cm high.

The tiles are sold in boxes and there are 20 tiles in each box.
Each box of tiles costs £8.50

Work out the total cost of the boxes of tiles Andy needs to buy.
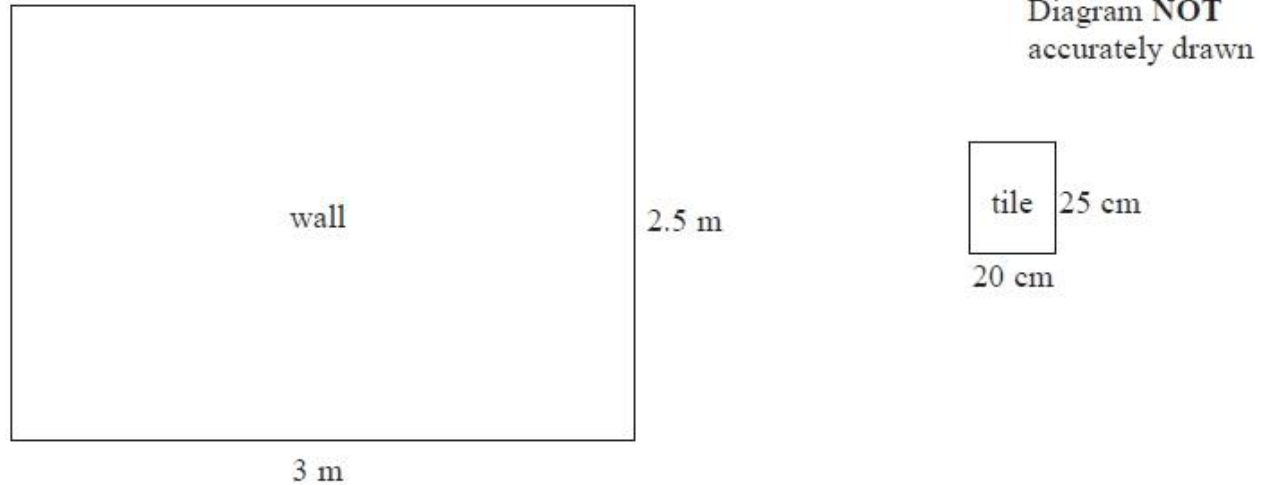
Andy is going to cover a wall with tiles

wall

250cm

300cm

Diagram **NOT** accurately drawn

tile | 25 cm

20 cm

The wall is in the shape of a rectangle which is 3 m wide and 2.5 m high.

Change the units to match the tile …..

Find the area of the wall

Area of wall = 250 x 300 =   75000 cm²

Andy is going to cover a wall with tiles

wall

2.5 m

3 m

tile 25 cm

20 cm
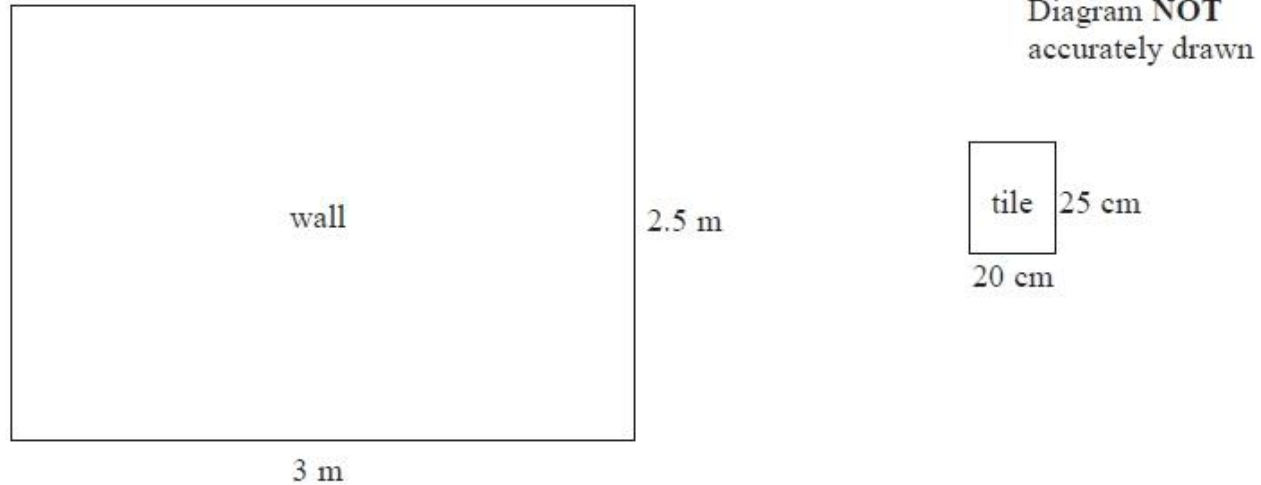
The tiles are rectangles 20 cm wide and 25 cm high.

The tiles are sold in boxes and there are 20 tiles in each box.

Each tile has an area of 25 x 20 = 500 cm^2

A box of tiles will cover 500 x 20 = 10000 cm^2

Andy is going to cover a wall with tiles

Diagram **NOT** accurately drawn

wall

2.5 m

tile 25 cm

20 cm

3 m

The number of boxes needed is found by 75 000 ÷ 10 000 = 7.5

He must buy 8 boxes

Each box of tiles costs £8.50

Work out the total cost of the boxes of tiles Andy needs to buy.

The cost would be £8.50 x 8 = £68.00

9 m
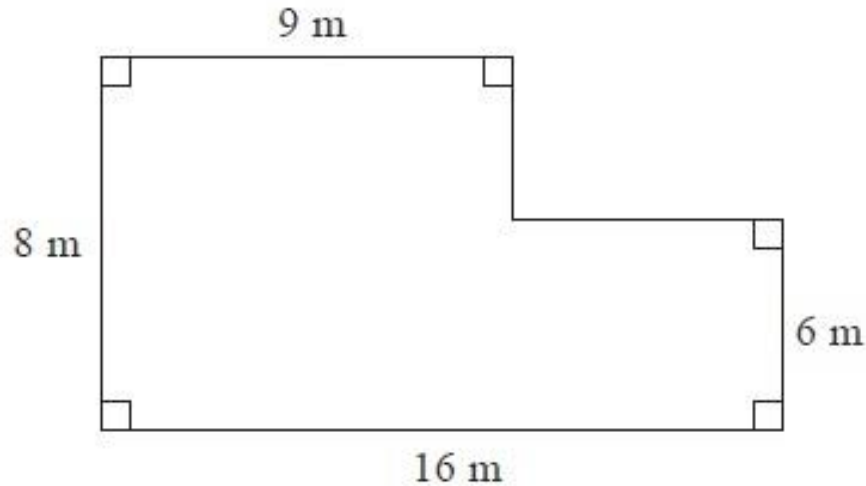
8 m

6 m

16 m

The caretaker needs to polish the floor of the village hall as shown above.
One tin of polish normally costs £19 and is enough to cover 12 m² of floor.

There is a discount of 30% off the cost of the polish.

The caretaker has £130

Has the caretaker got enough money to buy the polish for the floor?
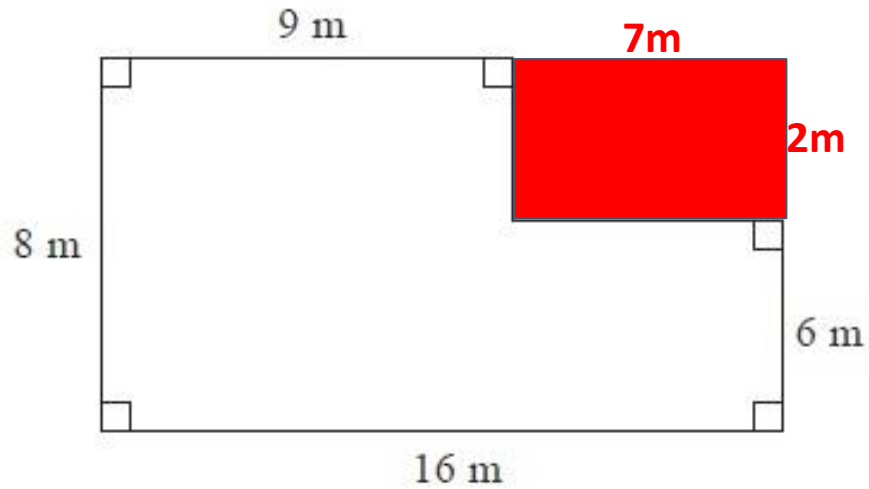
9 m

7m

2m

8 m

6 m

16 m

Find the area of the floor....

Grey rectangle = 16 X 8 = 128 m²
Red rectangle = 7 x 2 = 14m²

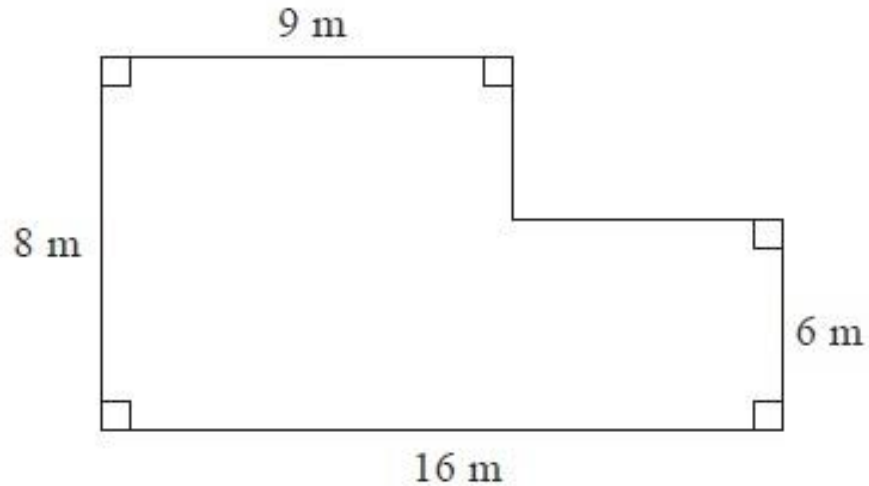**Floor area = 128 - 14 = 114 m²**

9 m

Diagram **NOT**
accurately drawn

8 m

6 m

16 m

The caretaker needs to polish the floor of the village hall as shown above.
One tin of polish normally costs £19 and is enough to cover 12 m² of floor.

One tin covers 12m²

114 ÷12 = 9.5   so she would need 10 tins

10 tins would usually cost 19 x 10 = £190

9 m

Diagram **NOT** accurately drawn
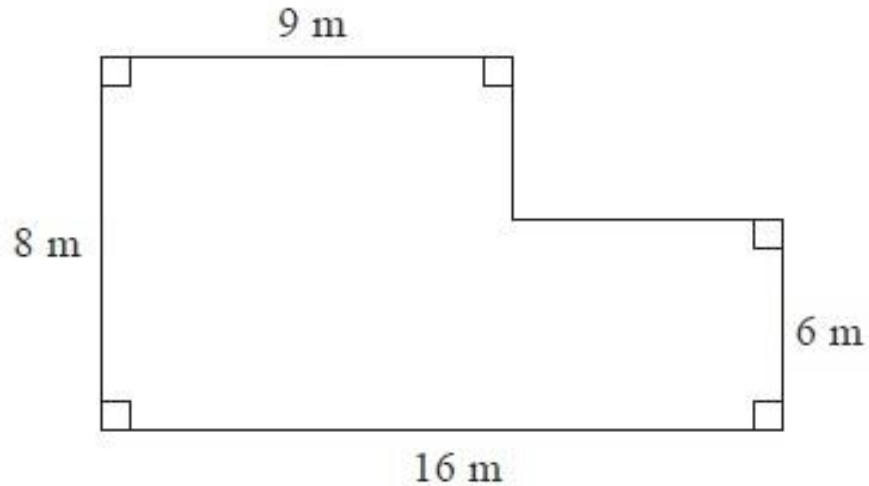
8 m

6 m

16 m

There is a discount of 30% off the cost of the polish.

Calculate the discount

10% of 190 = £19

30% of 190 = 19 x3 = £57

And the cost
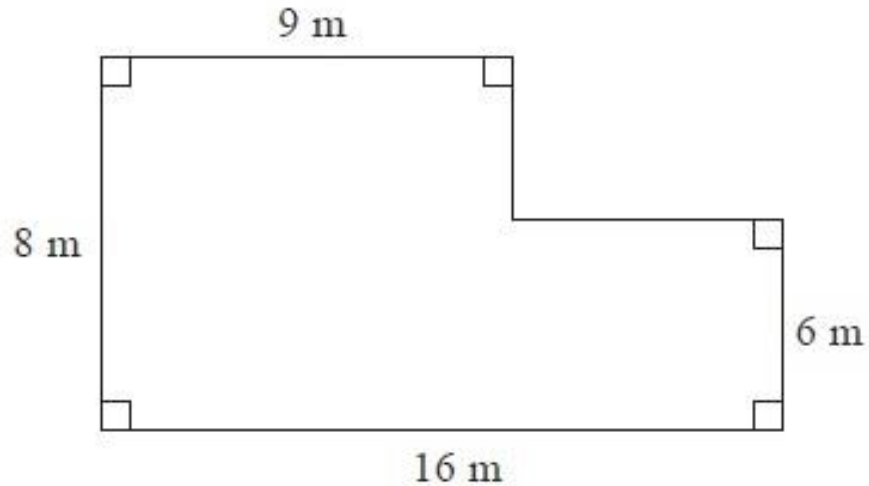
190 - 57 = £133

9 m

8 m

6 m

16 m

Diagram **NOT** accurately drawn

The caretaker has £130

Has the caretaker got enough money to buy the polish for the floor?

Answer the question...

The cost is £133 so no the caretaker does not have enough money