

Functional Skills
 Mathematics Assessment
 Level 2

Learner name

Run ID

Learner signature

Centre

Assessment date

Question	Available marks	1 st Marker	2 nd Marker
Task 1 Q1a	7		
Task 1 Q1b	8		
Task 2 Q1	6		
Q2a	1		
Q2b	1		
Q2c	5		
Q2d	1		
Q3a	7		
Q3b	6		
Q4a	7		
Q4b	1		
Total	50		

Instructions to learners

You may use a calculator

You **will** need a pen, pencil and ruler.

You **may** need access to a 90° set square, a compass, and a protractor.

Use only blue or black ink. Pencil **must only** be used for drawing.

There are 2 tasks in this assessment.

You must attempt all tasks.

Total marks available: 50

You have **two hours** to finish the assessment.

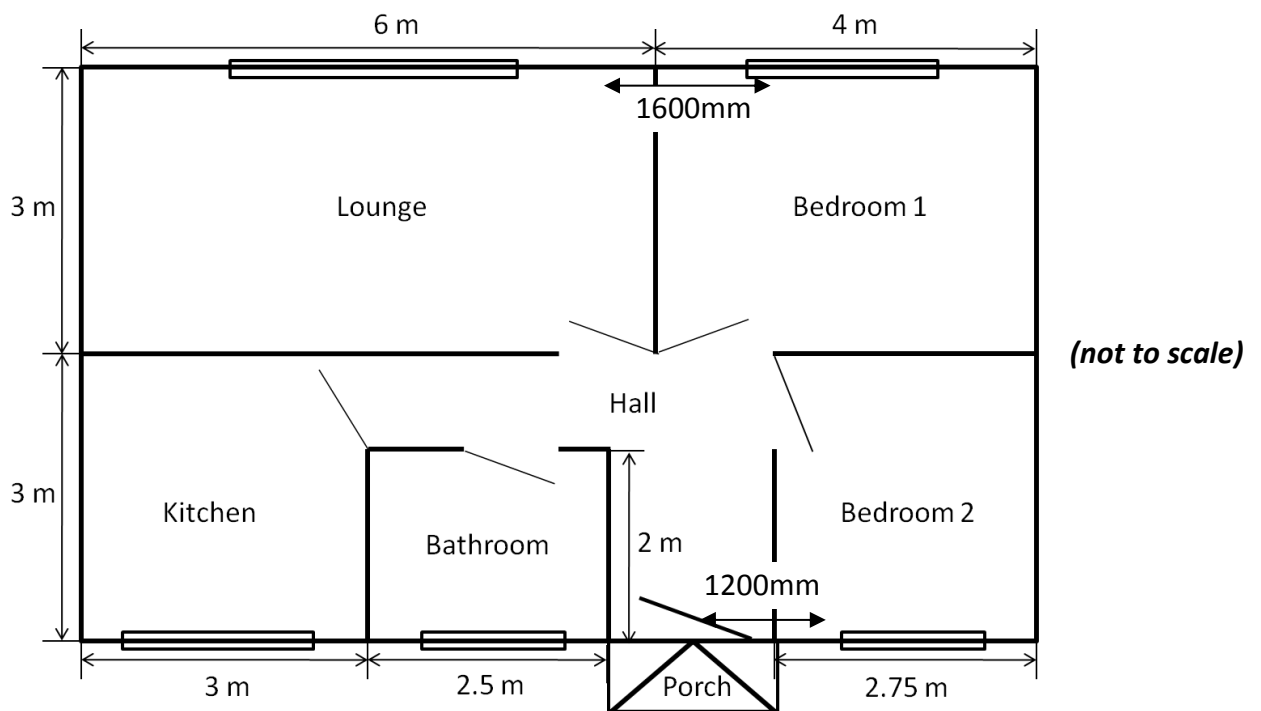


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Task 1

Question 1

The plan below shows the layout of a bungalow.
 The height of the walls is 2.3m.
 The doors are 0.75 m wide x 2.0 m high.

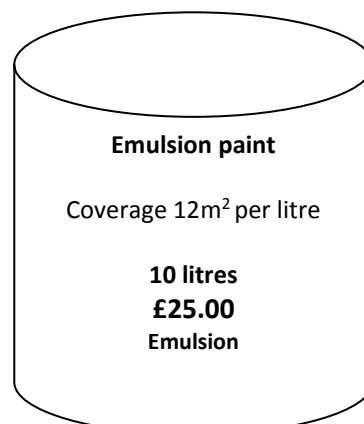


You want to paint the walls of bedroom 1. The windows are 3 feet high and the skirting boards are 2.5 inches in depth.

The walls need two coats of Emulsion paint.

1 foot = 0.3048m

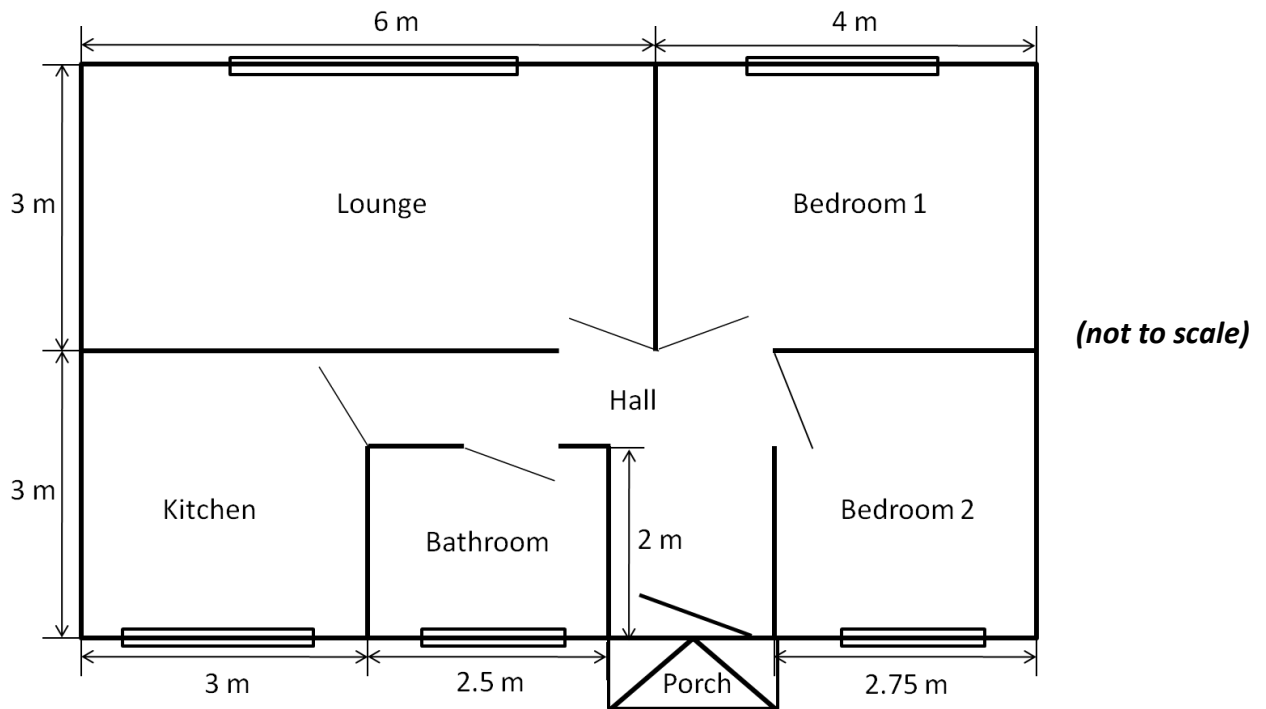
1 inch = 2.54 cm



1a) Work out how much it will cost to paint the two bedrooms.

Show your workings out here.

(7 marks)



You need to purchase skirting board (edging around walls) for the lounge, bedroom 1 and bedroom 2.

- The skirting boards are 2.5 inches in depth.
- The skirting boards come in packs of 4 and 6 each skirting board is 2400mm long.
- The doors are 0.75m wide.

1b) Work out how many packs of skirting board you will need for the lounge, bedroom 1 and bedroom 2. What is the best way to buy the packs. Explain your answer.

Show your workings out here.

(8 marks)

Task 2

Question 1

Health and Safety on site is very important.

Your managers are responsible for the safety of construction workers on site and need to complete a NEBOSH Certificate in Construction Health and Safety course. You want to choose the best training company. You find the following information on line.

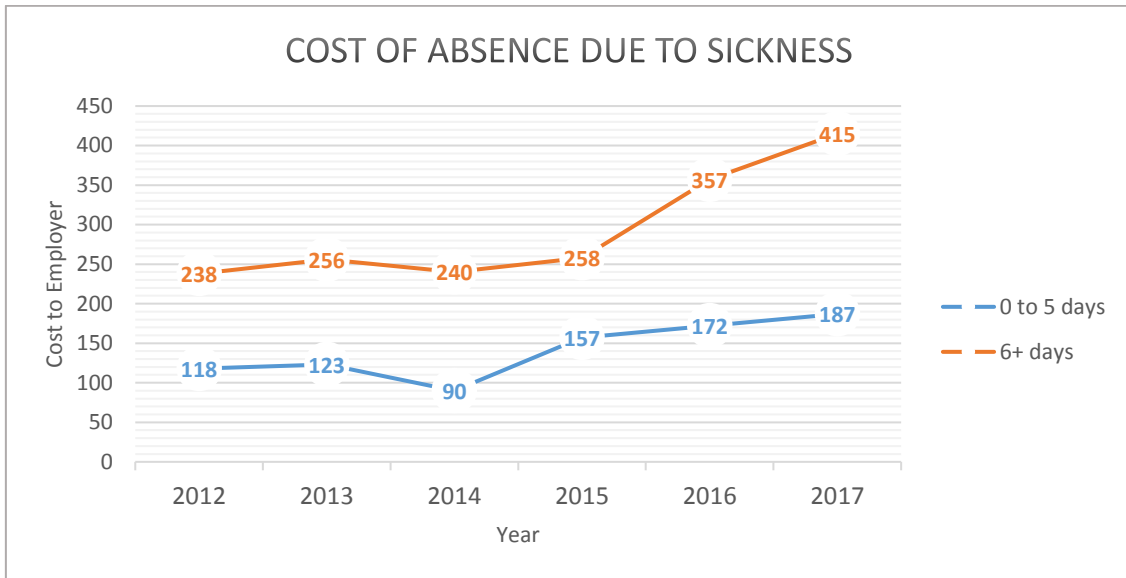
Company	Customer Ratings 1 is poor, 10 is Excellent
H&S4U	4, 4, 7, 6, 4, 5, 9, 7, 10, 1, 2, 6, 3
CCQR UK	4, 5, 3, 2, 10, 9, 9, 8, 3, 3, 6
Construction Trainer	5, 9, 3, 2, 2, 2, 8, 8, 4
Site Safe	10, 10, 5, 5, 2, 1, 1, 10, 7

1) Which company would you choose? Justify your decision using the data provided.

Show your workings out and your answer.

(6 marks)

Question 2



You have this information about days off due to sickness on your construction sites. You want to predict the cost of absence days for 2018.

2a) Draw a trend line above to show your predictions.

(1 mark)

2b) Use your trend lines to state your predictions for: 0 to 5 days and 6+ days.

Use this space for your prediction.

(1 mark)

National statistics predict that in 2018 6+ days absence will fall by 21.7% and 0 to 5 days absence will rise by 3.4%.

You have been told that you could save £90.00 if the predictions are correct.

2c) Using all the information is this prediction correct? Explain your answer.

Show your workings out and your answer.

(5 marks)

2d) Show how you have checked your answer.

(1 mark)

Question 3

You have been asked to give a presentation for the next Tool Box talk. This is to discuss the predicted increase/decrease in accidents on site. You want to present the following information:

Estimated number of accidents on site by category		
Accidents	2016	Increase/decrease predicted for 2017
Slips, trips and falls	54	0.7
Defective Equipment	750	- 29%
Poor lifting and handling	120	73%
RIDDOR related	434	1/3

3a) Compare the amount of accidents per category in 2016 and 2017. Comment on your findings.

Show your workings out and your answer

(7 marks)

3b) Create a chart or graph comparing the amount of accidents per category in 2016 and 2017. Include a comparison of yearly totals.

Use this space for your drawing

(6 marks)

A large grid for drawing a chart or graph, consisting of 20 columns and 25 rows of squares.

Question 4

There are four company cars in your construction company and you are thinking of selling the car that leaves the biggest carbon footprint over a year.

Estimated Carbon Footprint		
Car	Mileage per month	Miles Per Gallon
Ford Focus	3000	42
Mini	1500	56
Range Rover	1200	23
Mazda	1000	39

$$C = \frac{M}{G} \times 19.4$$

C = carbon footprint in tonnes
G = miles per gallon
M = mileage per year

You must add 10% to find the overall carbon emissions for each car.

4a) Which car do you think you should sell? Explain your answer.

Show your workings out here

(7 marks)

4b) Show how you check your answer.

(1 mark)

END OF ASSESSMENT

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