

# **Pearson Edexcel Level 1 Award in Using Shape, Space and Position (QCF)**

## **Sample Assessment Materials (SAMs)**

First teaching January 2014

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ISBN 9781446909331

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## **Introduction**

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Sample assessment materials (SAMs) provide learners and centres with specimen questions and mark schemes. These are used as the benchmark to develop the external assessment learners will take.

### **Using Shape, Space and Position**

The SAM for this unit has been provided for the following qualification:

- Pearson Edexcel Level 1 Award in Using Shape, Space and Position (QCF).



## **Using Shape, Space and Position – Sample assessment test and mark scheme**

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This sample assessment test and mark scheme is for the following qualification:

- Pearson Edexcel Level 1 Award in Using Shape, Space and Position (QCF).



# Pearson Edexcel

## Award in Using Shape, Space and Position (QCF) Level 1

Sample Assessment Material  
**Time: 1 hour**

Paper Reference  
XXX/XX

Resources: Calculator, Protractor, Metric ruler

Total marks:  
27

Center Name:

Centre Number:

Candidate's Name:

Registration Number:

### Instructions

- Candidates need access to a calculator, a metric ruler and a protractor.
- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and registration number.
- Answer all questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 27.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Some questions must be answered with one tick in a box (✓).  
If you change your mind about an answer, put a line through the box (✗) and then mark your new answer with a tick [✓].

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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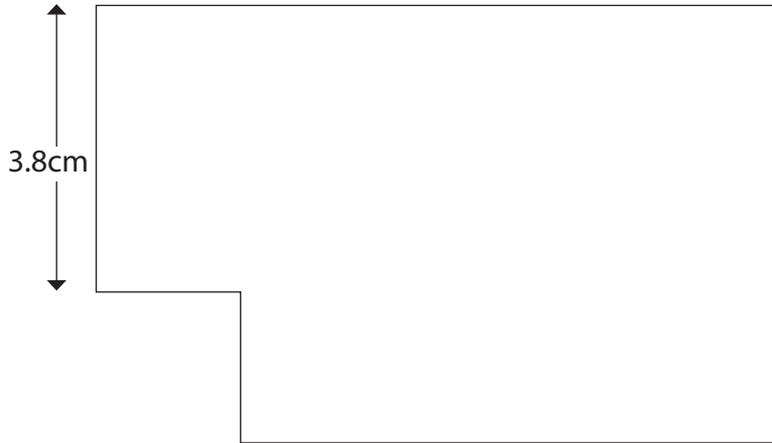


PEARSON

### Question 1

A hairdresser wants to set up a new hair salon.

A plan of the salon office floor is drawn to a scale of 2 centimetres to 1 metre.



On the scale plan, the length of one wall is 3.8 centimetres.  
The hairdresser wants to put a desk along this wall.

(a) Work out the length of the actual wall.

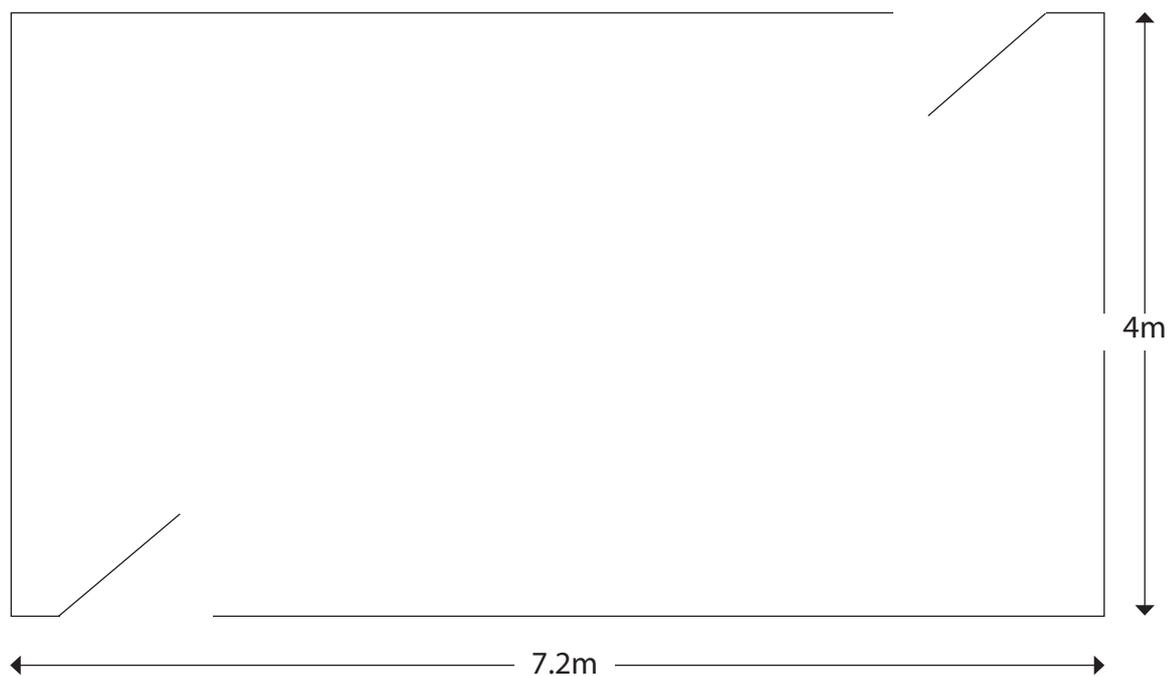
(2)

**You must show your working here:**

**Answer:**

**metres**

This is a floor plan of the main room in the salon.



The hairdresser wants to have tiles on the floor of the main room in the salon.

(b) What is the floor area of this room in square metres ( $\text{m}^2$ )?

(2)

**You must show your working here:**

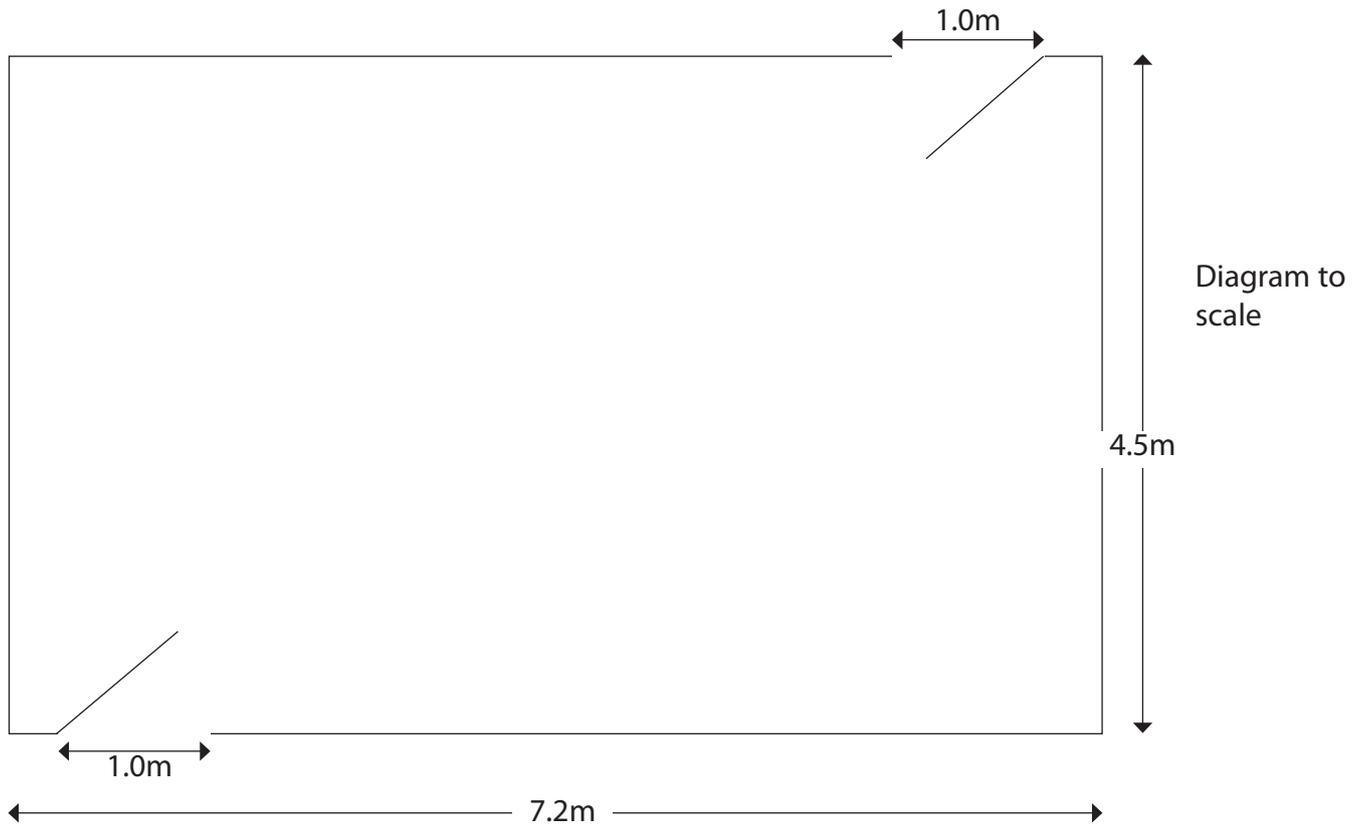
**Answer:**

**$\text{m}^2$**

**(Total for Question 1 = 4 marks)**

## Question 2

The diagram shows the salon floor plan with the door locations.



A border must be laid all the way round the bottom of the walls of the room, except for where the doors are located.

- (a) Work out the amount of border needed.

Include units in your answer.

(4)

**You must show your working here:**

**Answer:**

The number of radiators needed depends on the volume of the room.  
The hairdresser finds the volume of the room to work out how many radiators need to be fitted.

The room is 4.5 metres in width, 7.2 metres in length and 2.5 metres in height.

(b) What is the volume of the room in cubic metres ( $\text{m}^3$ )?

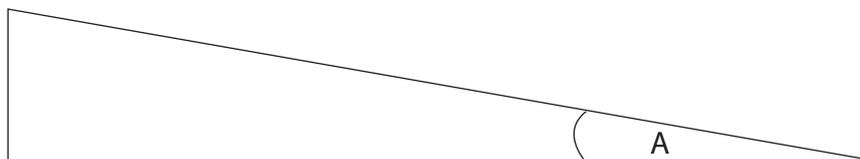
(2)

**You must show your working here:**

**Answer:**  $\text{m}^3$

The hairdresser wants to fit a ramp at the front door of the salon to improve access.

This is a scale plan of the side of the ramp.



(c) Measure the size of angle A on the diagram using a protractor.

(1)

**Answer:** degrees

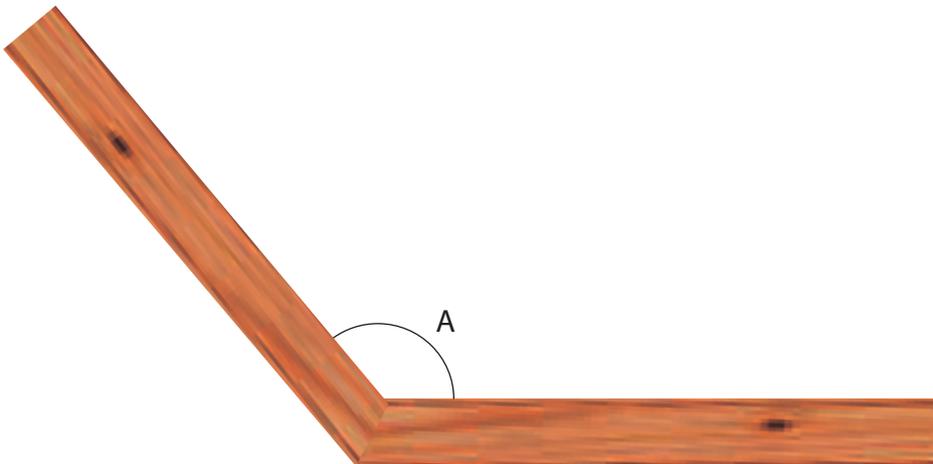
**(Total for Question 2 = 7 marks)**

### Question 3

A garden designer wants to build a wooden container for plants.



This diagram shows two pieces of wood for the sides of the container.



(a) Measure the size of the angle A on the diagram using a protractor.

(1)

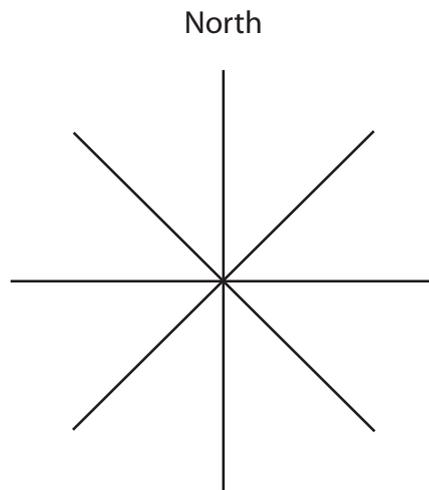
**Answer:**

**degrees**

In the garden, the container should be sheltered from the wind.  
The wind blows from the south west.

(b) Label south west (SW) on the diagram.

(1)



A new drive will be built in the garden.  
The drive will be 6.0 metres in length and 3.5 metres in width.  
The drive will need gravel with a depth of 0.1 metres.

(c) What is the volume of gravel needed, in cubic metres ( $\text{m}^3$ )?

(2)

**You must show your working here:**

**Answer:**

**$\text{m}^3$**

The designer has a plan of the garden drawn to a scale of 1 centimetre to 2 metres.

On the scale plan, the length of a path is 4.2 centimetres.

(d) Work out the length of the actual path?

(2)

**You must show your working here:**

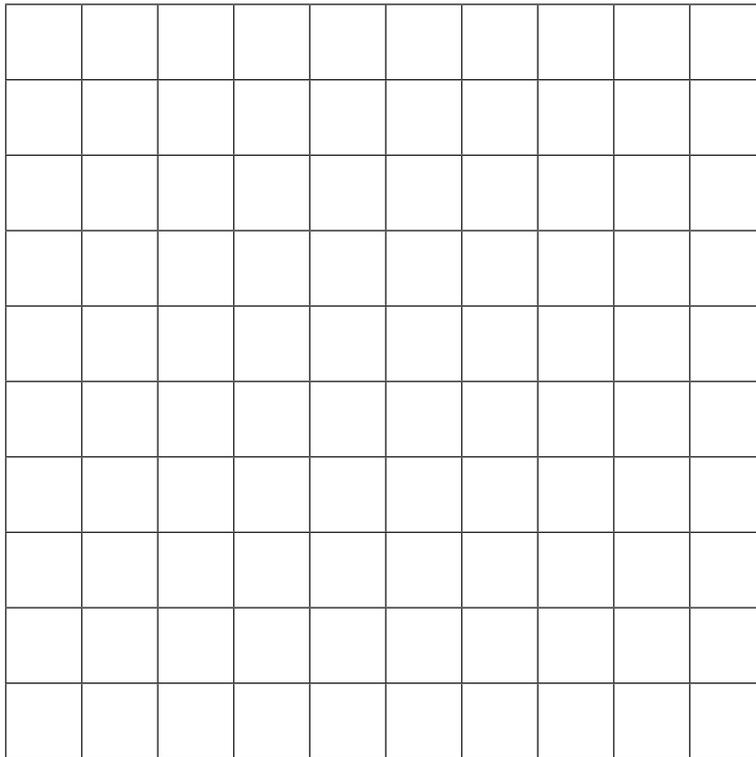
**Answer:**

**metres**

**(Total for Question 3 = 6 marks)**

#### Question 4

The scale diagram shows a plan of some land owned by a club.



The scale is 1 cm = 5 m.

The groundskeeper at the club wants to place a shed in one corner of the land. The shed has a square base with sides of length 10 metres.

- (a) Calculate the length of the sides of the shed drawn to scale.  
Draw a square on the scale diagram to represent the shed.

(2)

**You must show your working here:**

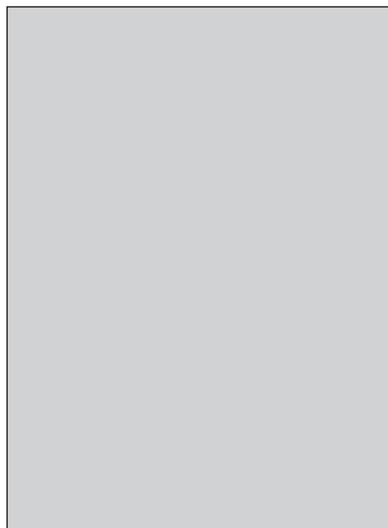
The groundskeeper wants to mark out a section of the land for a new playground. The playground will be a rectangle of length 35 metres and width 20 metres.

- (b) Calculate the length of the sides of the playground drawn to scale.  
Draw a rectangle on the scale diagram to represent the playground section.

(2)

**You must show your working here:**

This diagram shows a part of the playground that will have safety matting.



(c) Draw all the lines of symmetry on the diagram.

(2)

The playground will be a rectangle of length 35 metres and width 20 metres.

The groundskeeper needs to know its area to work out how much grass fertiliser is needed.

(d) Work out area of the playground?

(2)

**You must show your working here:**

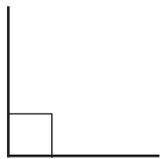
**Answer:**

**m<sup>2</sup>**

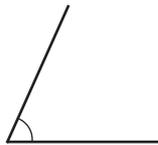
The playground will be surrounded by a wire fence held in place by posts. The posts that hold the wire fence must be at a right angle to the ground.

(e) Which of these angles is a right angle?

(1)



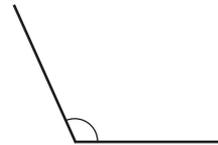
Angle A



Angle B



Angle C

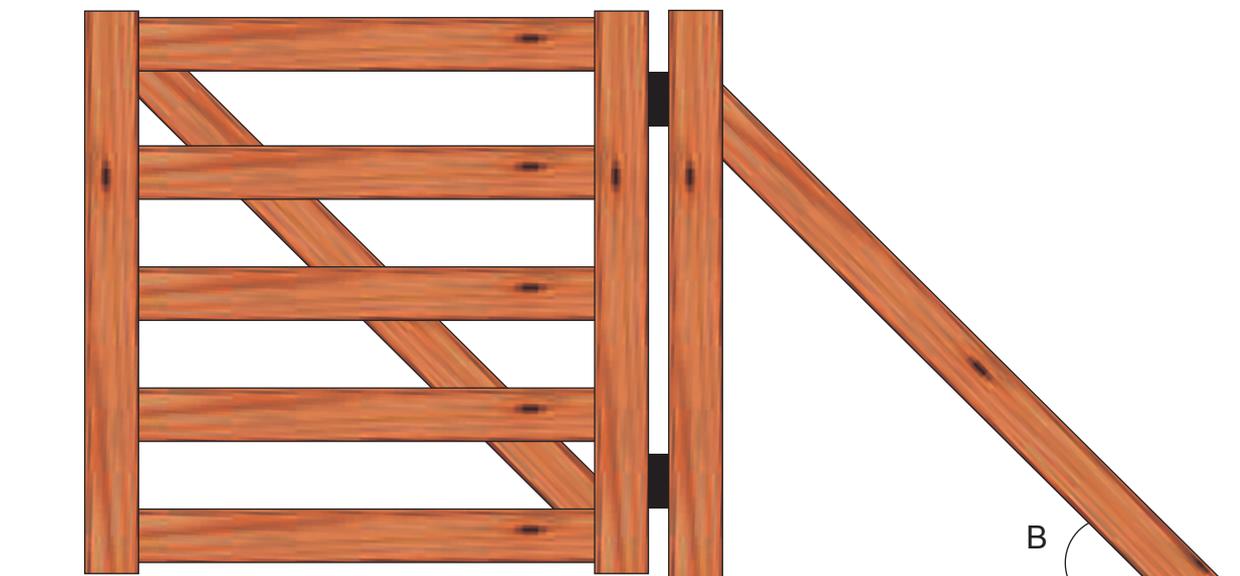


Angle D

Put a tick (✓) against the correct answer.

	✓
Angle A	
Angle B	
Angle C	
Angle D	

This diagram shows the gate of the playground and its wooden supports.



(f) Measure the size of the angle B on the diagram using a protractor.

(1)

**Answer:**

**degrees**

**(Total for Question 4 = 10 marks)**

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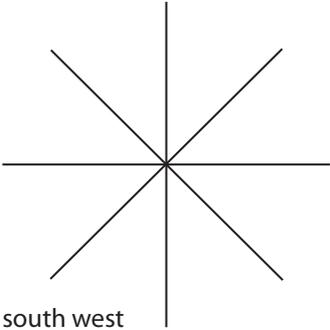
**TOTAL FOR PAPER 27 MARKS**

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## General Marking Guidance

- All candidates must receive the same treatment. Assessors must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Assessors should mark according to the mark scheme.
- All marks on the mark scheme should be used appropriately.
- All marks on the mark scheme are designed to be awarded. Assessors should always award full marks if deserved, i.e. if the answer matches the mark scheme. Assessors should also be prepared to award zero marks if a candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When assessors are in doubt about applying the mark scheme to a candidate's response, the centre's internal verifier must be consulted.
- Crossed-out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question	Reference	Answer	Notes	Total marks
1a	1.1	$3.8 \div 2$ 1.9 (m)	1 mark for correct method to use scale. 1 mark for correct length	2
1b	2.2	$7.2 \times 4.5 = 32.4$ 32.4 (m <sup>2</sup> )	1 mark for correct method to find floor area. 1 mark for correct floor area (units not required).	2
2a	2.1	$(7.2 + 4.5) \times 2 = 23.4$ 23.4 – 2 x 1 = 21.4 metres or $(7.2 - 1) = 6.2$ $6.2 + 6.2 + 4.5 + 4.5 = 21.4$ metres	1 mark for correct method to find perimeter, with or without doors. 1 mark for correct perimeter, with or without doors. 1 mark for correct length accounting for doors. 1 mark for correct units in symbols or words.	4
2b	2.3	$4.5 \times 7.2 \times 2.5 = 81$ 81	1 mark for correct method to find volume. 1 mark for correct volume.	2
2c	3.2	10°	1 mark for correct answer. Accept 9 – 11°.	1
3a	3.2	130°	1 mark for correct answer. Accept 129 – 131°.	1
3b	3.3	Indication of south west on diagram, e.g. <div style="text-align: center;"> <p>North</p>  <p>south west</p> </div>	1 mark for correct answer.	1
3c	2.3	$6.0 \times 3.5 \times 0.1$ 2.1	1 mark for correct method to find volume. 1 mark for correct volume.	2
3d	1.1	$4.2 \times 2$ 8.4 (metres)	1 mark for correct method to use scale 1 mark for correct answer	2
4a	1.2	$10 \div 5 = 2$  Draws a square with sides of 2 cm on scale diagram	1 mark for correct method to find scaled dimensions shown either in part a or part b  1 mark for square with sides of length 2 cm drawn in one corner of the scale diagram.	2
4b	1.2	$35 \div 5$ or $20 \div 5$  Draws rectangle with one side 7 cm or 4 cm  Draws 7 cm by 4 cm rectangle on scale diagram	  1 mark for rectangle with one correct dimension OR 2 marks for rectangle with both dimensions correct.	2

Question	Reference	Answer	Notes	Total marks
4c	3.1	Draws correct lines of symmetry	1 mark for each correct line of symmetry drawn on the playground (maximum two lines). Maximum of two marks.	2
4d	2.2	$35 \times 20 =$ $700 \text{ (m}^2\text{)}$	1 mark for correct method. 1 mark for correct area.	2
4e	3.1	Angle A	1 mark for correct answer.	1
4f	3.2	45(°)	1 mark for correct answer. Accept 44 – 46°.	1
			<b>Total Marks</b>	<b>27</b>

## SAM Mark Scheme Coverage of Learning Outcomes

Question number	LO 1	LO2	LO3	Total
1a	2			
1b		2		
2a		4		
2b		2		
2c			1	
3a			1	
3b			1	
3c		2		
3d	2			
4a	2			
4b	2			
4c			2	
4d		2		
4e			1	
4f			1	
<b>Total marks available</b>	<b>8</b>	<b>12</b>	<b>7</b>	<b>27</b>
<b>Pass Mark</b>	<b>6</b>	<b>8</b>	<b>5</b>	<b>19</b>

Candidates must achieve the pass mark for each learning outcome achieved plus minimum total of 19 out of 27 to achieve unit.

# Learning Outcome and Unit Achievement Record

Center Name:

Centre Number:

Candidate's Name:

Registration Number:

Assessor Name:

Signature:

Date Test Taken:

Question number	LO 1	LO2	LO3	Total
1a				
1b				
2a				
2b				
2c				
3a				
3b				
3c				
3d				
4a				
4b				
4c				
4d				
4e				
4f				
<b>Total marks required to pass LO</b>	<b>6</b>	<b>8</b>	<b>5</b>	<b>19</b>
<b>Candidate marks total</b>				
<b>Pass Y/N?</b>				

Candidates must achieve the pass mark for each learning outcome achieved plus minimum total of 19 out of 27 to achieve unit.

**DECLARATION**

I confirm that the assessment was conducted properly and fairly and that the marks awarded are an accurate reflection of the performance of the candidate.

Assessor Signature

If this candidate has had any assistance during this test please state the nature of the assistance and who provided it

If there any special circumstances that may have had a negative effect on the candidate's performance in this test please give details.

If internally verified:

Internal Verifier's Name:

Signature:

Date:

LEARNING OUTCOME	MARKS AVAILABLE	ASSESSOR MARKS	IV MARKS
1	8		
2	12		
3	7		
Pass mark: minimum for each learning outcome met and a minimum total of 19 marks. Delete pass or fail as appropriate.		<b>PASS – FAIL</b>	<b>PASS – FAIL</b>

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ISBN 9781446909331 October 2013

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