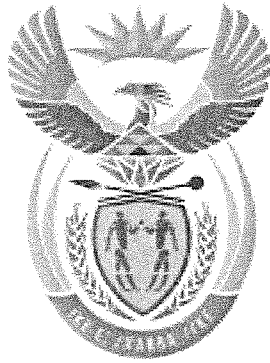


2013/11/04/1



# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

**T210(E)(N19)T  
NOVEMBER EXAMINATION  
NATIONAL CERTIFICATE  
BUILDING DRAWING N1**

(8090001)

**19 November 2013 (X-Paper)  
09:00–12:00**

**This question paper consists of 5 pages and 1 diagram sheet.**

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
NATIONAL CERTIFICATE  
BUILDING DRAWING N1  
TIME: 3 HOURS  
MARKS: 100

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**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions.
  2. Read ALL the questions carefully.
  3. Number the answers according to the numbering system used in this question paper.
  4. ALL drawings must be fully dimensioned and labelled.
  5. ALL the drawings must be in accordance with the National Building Regulations and the SABS Practice for Building Drawing.
  6. Fold the sheets to A4 when completed.
  7. Write neatly and legibly.
-

**QUESTION 1**

Draw an isometric view of a three-quarter bat. Any hidden details may not be show.

**NOTE:** Your preferred view may be illustrated

SCALE 1 : 2

[8]

**QUESTION 2**

Draw FOUR rectangles of 75 mm x 50 mm. Show the following hatching symbols and space the rectangles evenly:

- 2.1 Stock brick
- 2.2 Face brick
- 2.3 Block work
- 2.4 Stone work

(4 × 4)

[16]

SCALE 1 : 1

**QUESTION 3**

Draw the orthographic views of the isometric drawing in FIGURE 1, DIAGRAM SHEET 1 (attached).

SCALE 1 : 1

[8]

**QUESTION 4**

- 4.1 Draw the front elevation of a one-brick wall in stretcher bond, six courses high. The bottom layer must be seven bricks long.

Show a stopped end on the left side and a raking back on the right side.

SCALE 1 : 10

(6)

- 4.2 Draw the front elevation of a one-brick wall in English bond, six courses high. The bottom layer must be seven bricks long.

Show a stopped end on the left side and raking back on the right side

SCALE 1 : 10

(6)

[12]

**QUESTION 5**

5.1 Draw the front elevation of a standard two-panelled wooden door with a middle-lock rail. The overall dimensions of the door are as follows:

- 2032 mm x 813 mm.

More specification are as follows:

- Stile :100 x 44
- Top rail :200 x 44
- Middle rail :200 x 44
- Bottom rail :200 x 44
- Beading :15 x 15

SCALE 1 : 10

(18)

5.2 Refer to QUESTION 5.1 and draw a horizontal cross section through one of the stiles and part of the panel.

The following must be show:

- Stile :100 x 44
- Beading :15 x 15
- Panel :15 mm

SCALE 1 : 2

(12)  
[30]

**QUESTION 6**

Draw a horizontal cross-section of a wooden window frame built within a one-brick wall plastered on the inside only. The window frame does not have a casement.

Use the following specifications:

- Side rail : 80 mm x 40 mm
- Beading : 20 mm x 20 mm
- Glass : 3 mm

The overall size of the window frame is:

- 650 mm (width) x 550 mm (height)

SCALE 1 : 5

[14]

(8090001)

-5-

T210(E)(N19)T

**QUESTION 7**

Draw an elliptical gauged arch. The span is 1 200 mm and the rise is 400 mm.

SCALE 1 : 10

**NOTE:** Show the keybrick.

**[12]****TOTAL: 100**

ENGINEERING

DIAGRAM SHEET 1

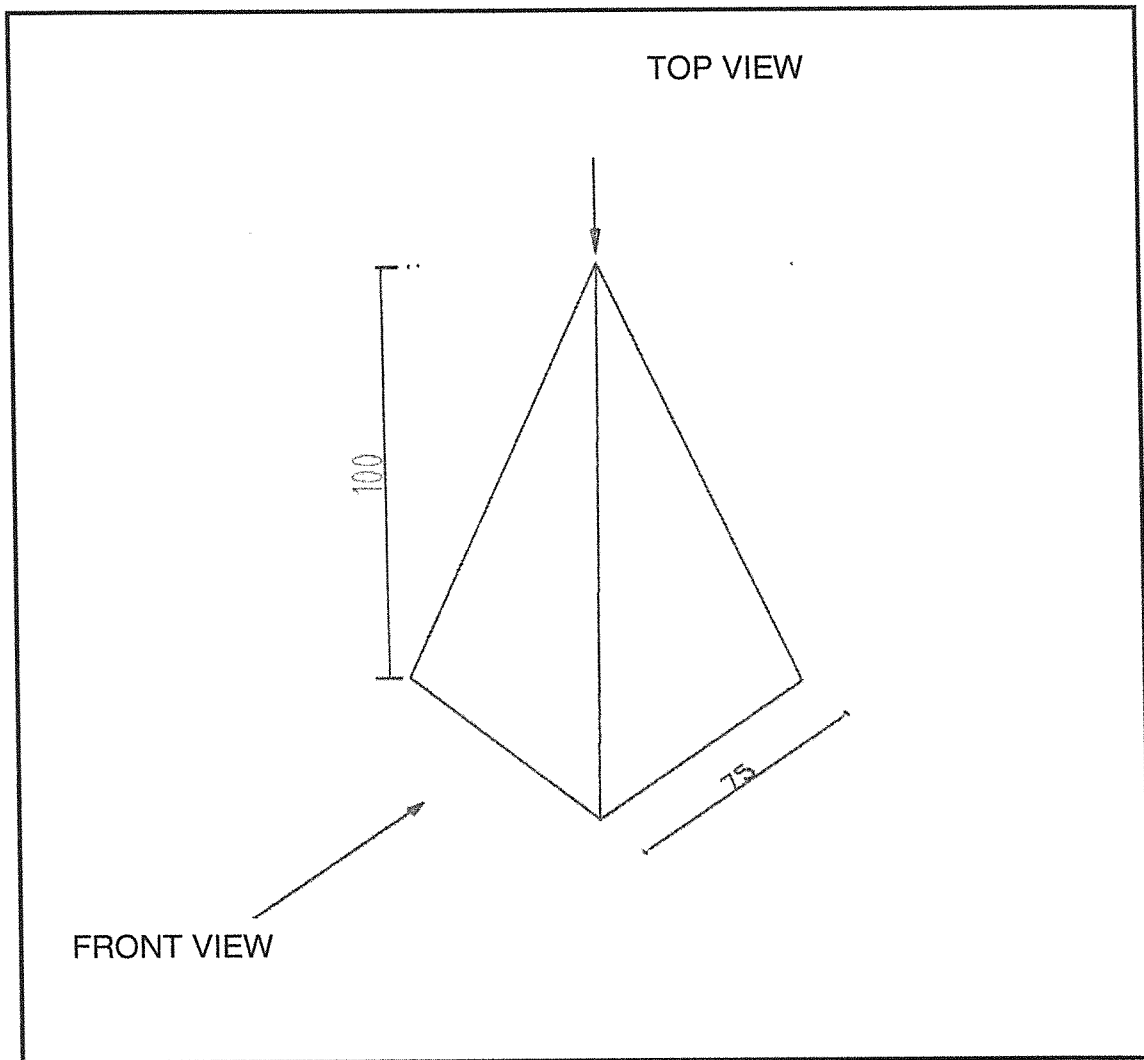


FIGURE 1

ENGINEERING



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**REPUBLIC OF SOUTH AFRICA**

## **MARKING GUIDELINE**

**NATIONAL CERTIFICATE**

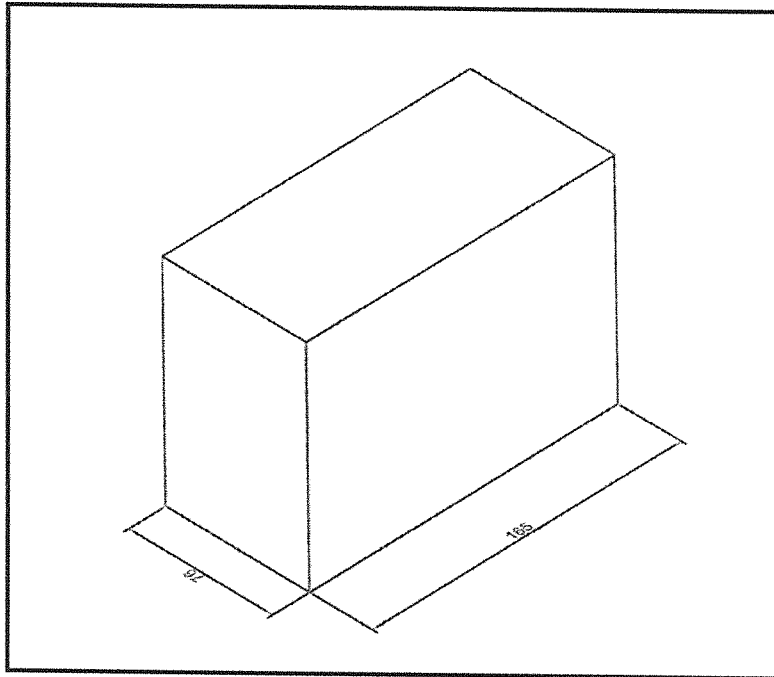
**NOVEMBER EXAMINATION**

**BUILDING DRAWING N1**

**19 NOVEMBER 2013**

**This marking guideline consists of 10 pages.**

**QUESTION 1**



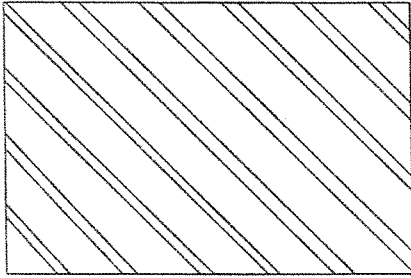
ISOMETRIC VIEW -  $\frac{3}{4}$  BAT SCALE

ISOMETRIESE AANSIG -  $\frac{3}{4}$  PASSTEEN

[8]

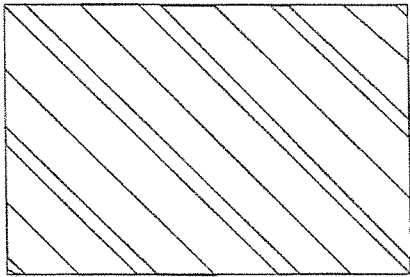
**QUESTION 2**

2.1



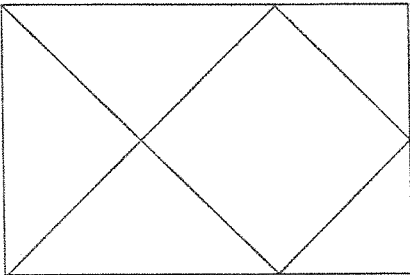
(4)

2.2



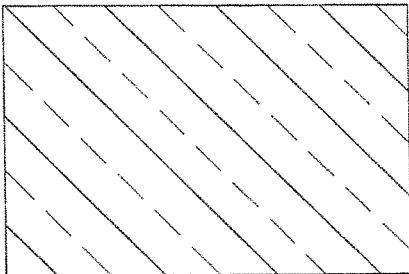
(4)

2.3



(4)

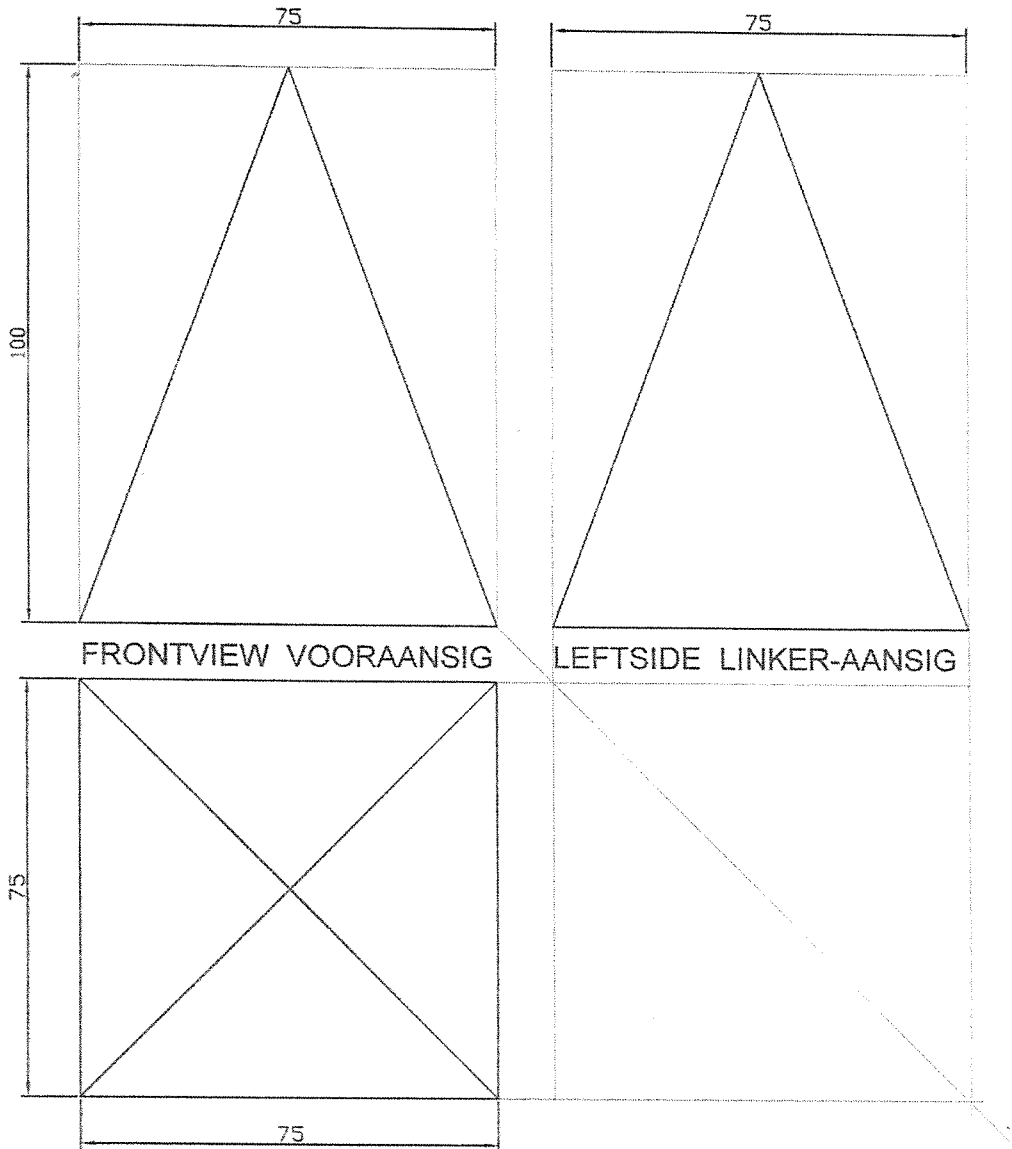
2.4



Scale 1:1

(4)  
[16]

**QUESTION 3**



FRONTVIEW VOORAANSIG

LEFTSIDE LINKER-AANSIG

TOP VIEW BO-AANSIG

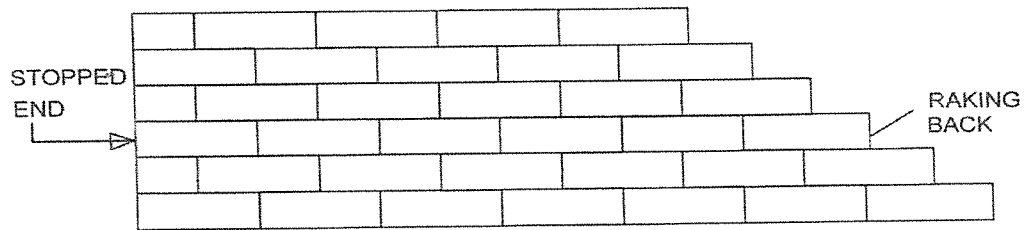
ORTHOGRAPHIC VIEW OF A PIRAMID SCALE 1 : 1

ORTOGRAFIESE AANSIG VAN 'n PIRAMIDE SKAAL 1 : 1

[8]

**QUESTION 4**

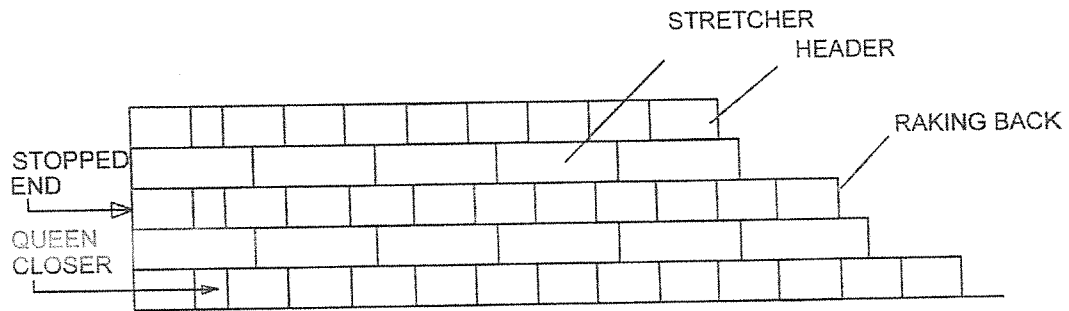
4.1



THE FRONT ELEVATION OF A WALL BUILT IN STRETHER BOND SCALE 1 : 10  
DIE VOORAANSIG VAN 'n MUUR GEBOU IN STRYKVERBAND SKAAL 1 : 10

(6)

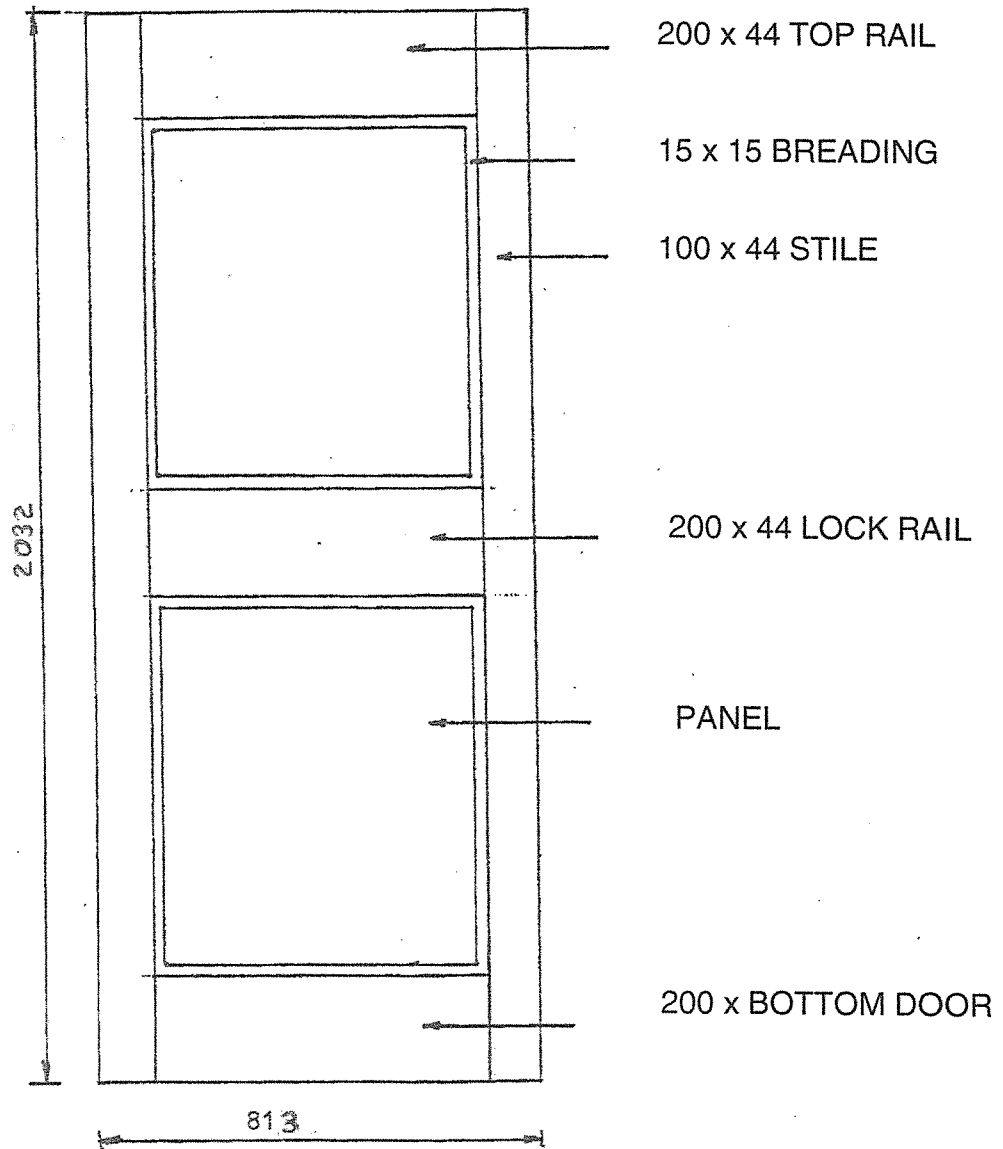
4.2



THE FRONT ELEVATION OF A WALL BUILT IN ENGLISH BOND SCALE 1 : 10  
DIE VOORAANSIG VAN 'n MUUR GEBOU IN ENGELSEVERBAND SKAAL 1 : 10

(6)  
[12]

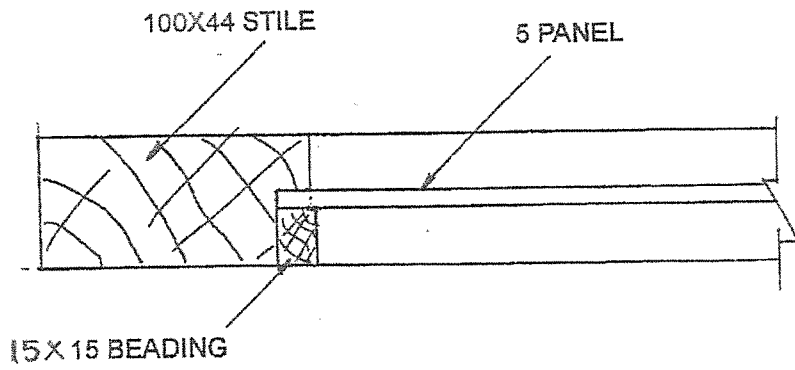
**QUESTION 5**



FRONT VIEW OF A TWO PANEL INTERNAL DOOR  
SCALE: 1 : 10

(18)

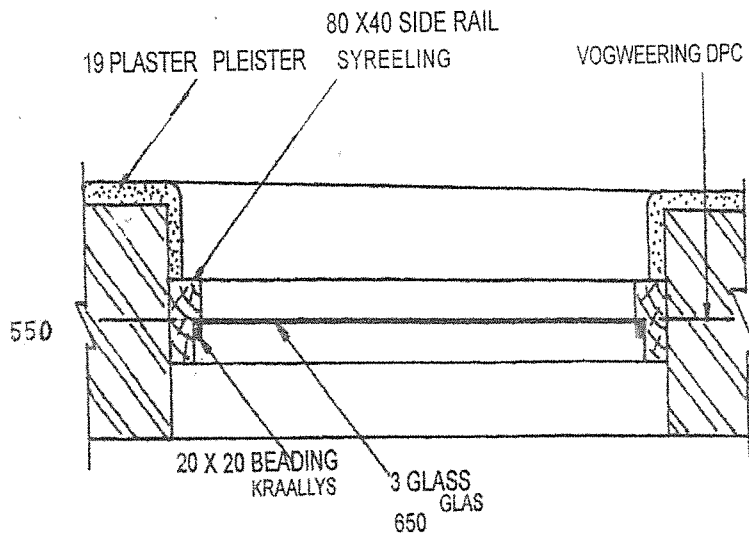
5.2



**THE HORIZONTAL CROSS SECTION OF  
A TWO PANEL INTERNAL DOOR (STILE ONLY)**  
**SCALE: 1:2**

(12)  
[30]

**QUESTION 6**

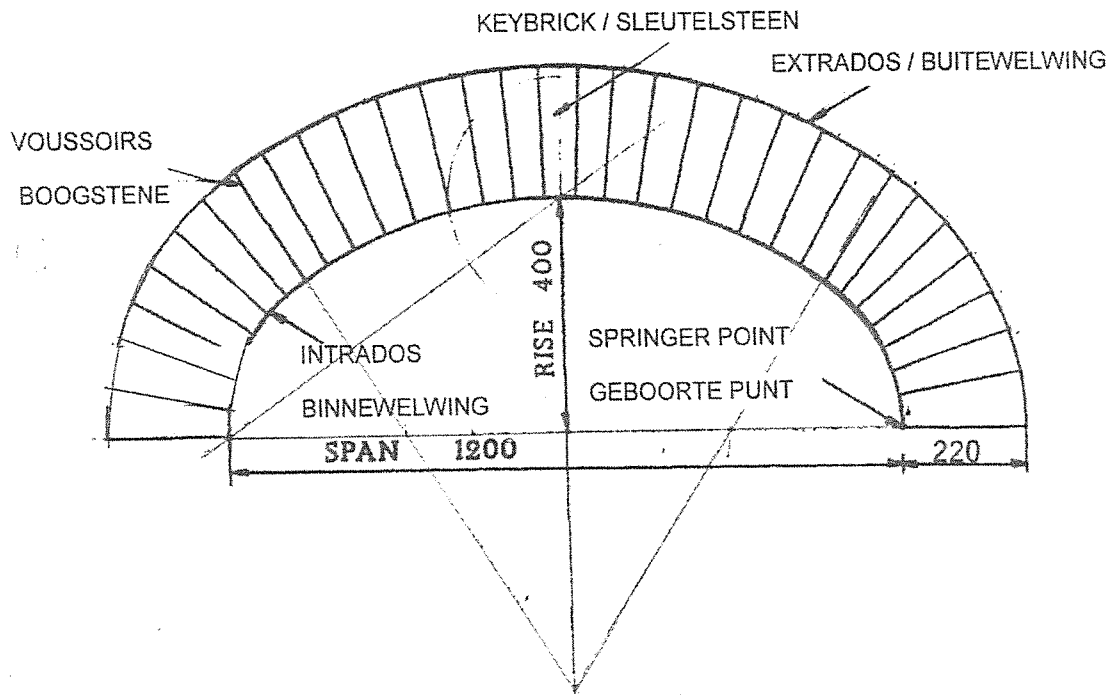


**HORIZONTAL CROSS SECTION  
THROUGH A WOODEN WINDOW  
WITHOUT CASEMENTS  
SCALE: 1:5**

**DWARSDEURSNIET VAN 'n  
HOUTVENSTER SONDER SWAAIRAAM  
SKAAL: 1:5**

[14]

**QUESTION 7**



**AN ELLIPTICAL GAUGED ARCH**

SCALE: 1:10

**ELLIPTIESE PASBOOG**

SKAAL: 1:10

[12]

**TOTAL: 100**

PLEASE NOTE THAT IF THE CORRECTNESS IS "0" THEN NO OTHER MARKS MAY BE ADDED  
LET WEL DAT AS DIE KORREKTHEID "0" IS MAG GEEN ANDER PUNTE BYGETEL WORD NIE

100

Question/Vraag	1	Nov	8	Question/Vraag	5.1	Nov	18
correctness/korrektheid	5.5			correctness/korrektheid	13		
accuracy/akkuraatheid	0.5			accuracy/akkuraatheid	1		
neatness/netheid	0.5			neatness/netheid	1		
titles;labels/hoofopskrifte;byskrifte	0.5			titles;labels/hoofopskrifte;byskrifte	1		
dims&scale/afmetings&skaal	0.5			dim&scale/afmetings&skaal	1		
setting out/uiteensit	0.5			setting out/uiteensit	1		

Question/Vraag	2	Nov	16	Question/Vraag	5.2	Nov	12
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accuracy/akkuraatheid	0.5			accuracy/akkuraatheid	0.5		
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dims&scale/afmetings&skaal	0.5			dim&scale/afmetings&skaal	0.5		
setting out/uiteensit	0.5			setting out/uiteensit	0.5		

Question/Vraag	3	Nov	8	Question/Vraag	6	Nov	14
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dims&scale/afmetings&skaal	0.5			dim&scale/afmetings&skaal	1		
setting out/uiteensit	0.5			setting out/uiteensit	1		

Question/Vraag	4.1	Nov	6	Question/Vraag	7	NOV	12
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titles;labels/hoofopskrifte;byskrifte	0.5			titles;labels/hoofopskrifte;byskrifte	1		
dims&scale/afmetings&skaal	0.5			dim&scale/afmetings&skaal	1		
setting out/uiteensit	0.5			setting out/uiteensit	1		

Question/Vraag	4.2	Nov	6	Question/Vraag			
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accuracy/akkuraatheid	0.5			accuracy/akkuraatheid			
neatness/netheid	0.5			neatness/netheid			
titles;labels/hoofopskrifte;byskrifte	0.5			titles;labels/hoofopskrifte;byskrifte			
dims&scale/afmetings&skaal	0.5			dim&scale/afmetings&skaal			
setting out/uiteensit	0.5			setting out/uiteensit			