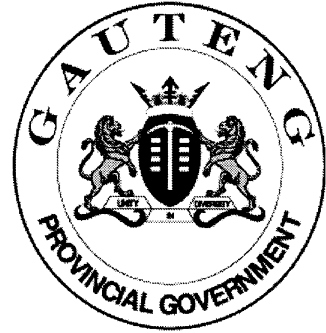


**SENIOR CERTIFICATE  
EXAMINATION  
*SENIORSERTIFIKAAT-EKSAMEN***



**OCTOBER / NOVEMBER  
*OKTOBER / NOVEMBER***

**2005**

**TECHNICAL DRAWING  
*TEGNIESE TEKENE***

*Second Paper / Tweede Vraestel*

**SG**

**711-2/2**

TECHNICAL DRAWING/TEGNIESE TEKENE SG  
Paper 2/Vraestel 2

Cover + 6 pages  
*Voorblad + 6 bladsye*



# 2005

## EXAM NUMBER / EKSAMENNOMMER

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

**SENIOR CERTIFICATE EXAMINATION  
SENIORSERTIFIKAAT-EKSAMEN**

**OCTOBER / NOVEMBER  
OKTOBER / NOVEMBER**

**TECHNICAL DRAWING SG  
TEGNIесе TEKENE SG**

SECOND PAPER / TWEЕDE VRAESTEL

ANSWER BOOK / ANTWOORDBOEK

TIME: 3 HOURS / TYD: 3 URE

MARKS: 150 / PUNTE: 150

711-2 Y

**REQUIREMENTS:**

- Drawing equipment.

**INSTRUCTIONS:**

- Answer ALL questions on the answer sheets provided.
- Write your examination number on EACH answer sheet.
- Approximate any dimensions not given.
- At the end of the session, all answers must be stapled together at the TOP LEFT-HAND corner in the correct sequence.
- All unused answer sheets must be handed in.

**BENODIGHEDE:**

- Tekeninstrumente.

**INSTRUKSIES:**

- Beantwoord ALLE vrae op die gegewe antwoordvelle.
- Skryf jou eksamennommer op ELKE antwoordvel.
- Benader enige afmetings wat nie gegee is nie.
- Aan die einde van die sessie moet AL die antwoordvelle in die korekte volgorde in die BOONSTE LINKERKANTSTE hoek vasgekram word.
- Alle ongebruikte antwoordvelle moet ingehandig word.

5 PAGES / 5 BLADSYE



| QUESTION<br>VRAAG        | MARKS<br>PUNTE | INITIAL<br>PARAFEER |
|--------------------------|----------------|---------------------|
| 1.                       |                |                     |
| 2.                       |                |                     |
| 3.                       |                |                     |
| 4.                       |                |                     |
| TOTAL<br>TOTAAL          |                |                     |
| CONTROLLER<br>KONTROLEUR |                |                     |

**QUESTION 1**

The given figure shows an isometric view of a casting. Draw to a scale of 1:2 and in third-angle orthographic projection the following views of the casting:

- 1.1 A front view as seen in the direction of the arrow.
- 1.2 A left view.
- 1.3 A top view.
- 1.4 Indicate the projection symbol representing third-angle orthographic projection in the space provided.

Hidden detail must be shown in the front view only.  
No dimensions required.

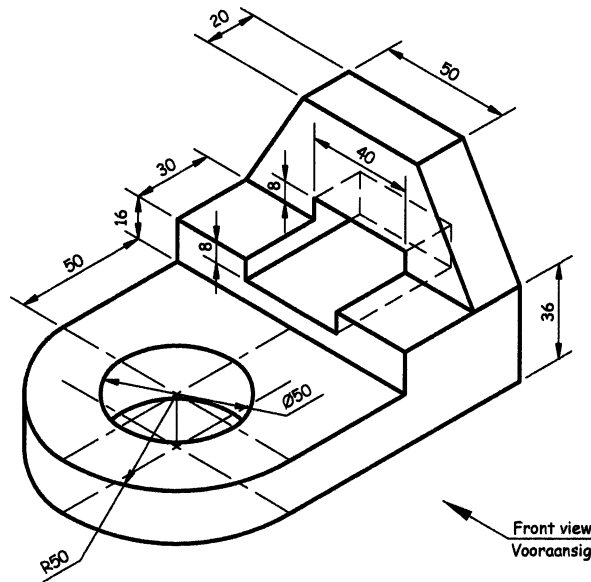
**VRAAG 1**

Die gegewe figuur toon 'n isometriese aansig van 'n gietstuk. Teken volgens 'n skaal van 1:2 en in derdehoekse ortografiese projeksie die volgende aansigte van die gietstuk:

- 1.1 'n Vooraansig vanuit die rigting wat deur die pyl aangedui word.
- 1.2 'n Linkeraansig.
- 1.3 'n Boaansig.
- 1.4 Toon die projeksiesimbool vir derdehoekse ortografiese projeksie in die ruimte wat daarvoor voorsien word.

Verborgte detail moet getoon word alleenlik in die vooraansig.  
Geen afmetings word vereis nie.

|                            |           |  |  |
|----------------------------|-----------|--|--|
| Placing<br>Plasing         | -3        |  |  |
| Presentation<br>Aanbieding | -2        |  |  |
| Accuracy<br>Akkuraatheid   | -2        |  |  |
| Front view<br>Vooraansig   | 7         |  |  |
| Top view<br>Bo-aansig      | 7         |  |  |
| Left view<br>Linkeraansig  | 9         |  |  |
| Symbol<br>Simbool          | 2         |  |  |
| <b>TOTAL<br/>TOTAAL</b>    | <b>25</b> |  |  |



SYMBOL / SIMBOOL

EXAM NUMBER:  
EKSAMENNOMMER:

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

TECHNICAL DRAWING STANDARD GRADE  
TEGNIËSE TEKENE STANDAARDGRAAD

SG 711 - 2 Y  
SG 711 - 2 Y

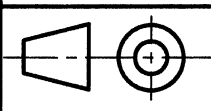
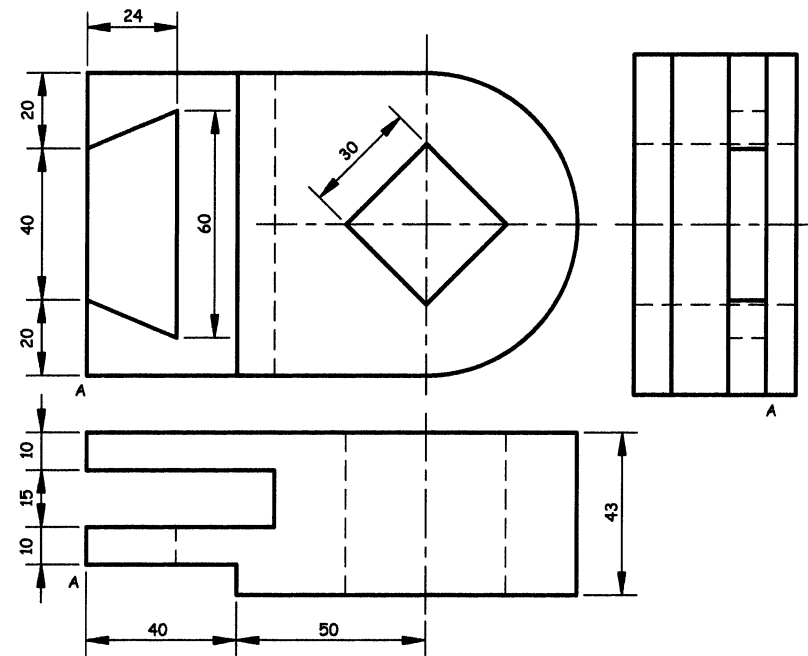
ANSWER SHEET 1  
ANTWOORDVEL 1

**QUESTION 2**

The given figure shows three views of a casting in first-angle orthographic projection. Draw to a scale of 1:1 a neat isometric view of the casting. Use point "A" to start the drawing.

**VRAAG 2**

Die gegewe figuur toon drie aansigte van 'n gietstuk in eerstehoekse ortografiese projeksie. Teken volgens 'n skaal van 1:1 'n netjiese isometriese aansig van die gietstuk. Gebruik punt "A" as beginpunt.



|                               |           |  |  |
|-------------------------------|-----------|--|--|
| Frontal plane<br>Voorste vlak | 10        |  |  |
| Top plane<br>Boonste vlak     | 6         |  |  |
| Left plane<br>Linker-vlak     | 6         |  |  |
| Linework<br>Lynwerk           | 3         |  |  |
| <b>TOTAL<br/>TOTAAL</b>       | <b>25</b> |  |  |

EXAM NUMBER:  
EKSAMENNOMMER:

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

TECHNICAL DRAWING STANDARD GRADE  
TEGNIесе TEKENE STANDAARDGRAAD

SG 711 - 2 Y  
SG 711 - 2 Y

ANSWER SHEET 2  
ANTWOORDVEL 2

**QUESTION 3**

Three views of a dwelling that has been developed as a project of 100 low-cost houses in Mamelodi, Tshwane-East, are shown. Draw a neat two-point perspective view of the dwelling.

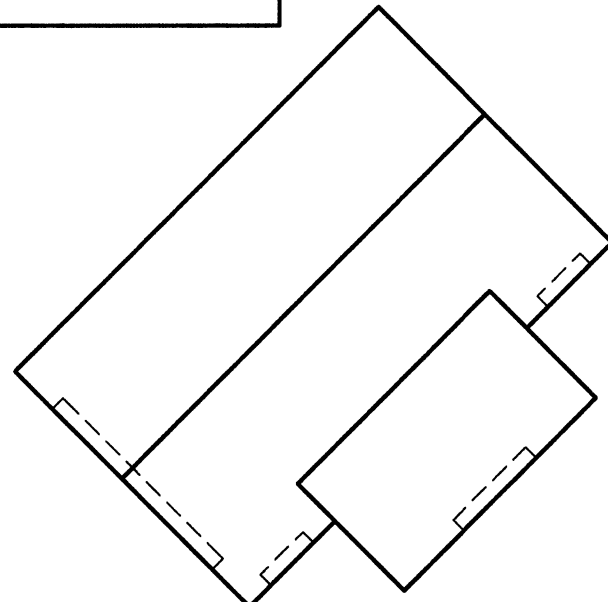
*No hidden detail is required. Ignore the wall thickness.*

**VRAAG 3**

Drie aansigte van 'n woning wat deel is van 'n projek van 100 laekoste-huise in Mamelodi, Tshwane-Oos, word getoon. Teken 'n netjiese tweepuntperspektief-aansig van die woning.

*Geen verborge detail hoef getoon te word nie. Ignoreer muur dikte.*

|  |           |  |  |
|--|-----------|--|--|
| Perspective view<br>Perspektief-aansig | 20        |  |  |
| Vanishing points<br>Verdwynpunte       | 2         |  |  |
| Accuracy<br>Akkuraatheid               | 3         |  |  |
| <b>TOTAL<br/>TOTAAL</b>                | <b>25</b> |  |  |

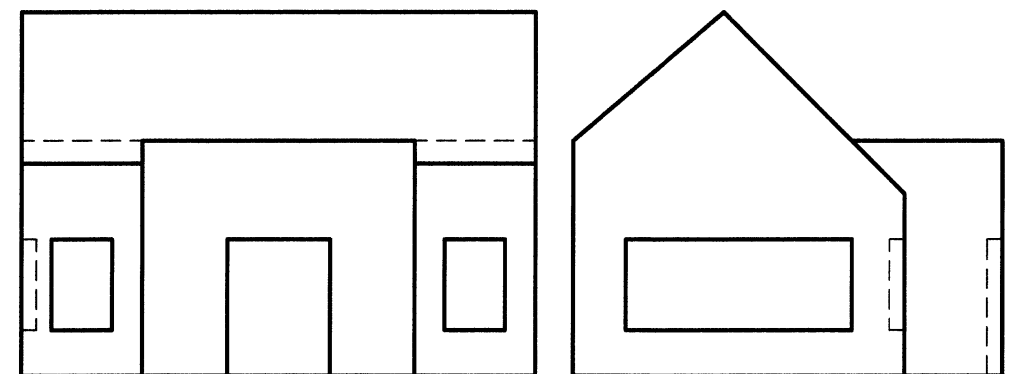


PP/PV

HL

GL

SP



EXAM NUMBER:  
EKSAMENNOMMER:

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

TECHNICAL DRAWING STANDARD GRADE  
TEGNIесе TEKENE STANDAARDGRAAD

SG 711 - 2 Y  
SG 711 - 2 Y

ANSWER SHEET 3  
ANTWOORDVEL 3

**QUESTION 4**

Figure 4.1 shows a half-sectional exploded isometric view of a **PULLEY ASSEMBLY**.  
Figure 4.2 shows the components of the **PULLEY ASSEMBLY**.

Use the given centre lines on **ANSWER SHEET 4** to draw to a scale of 1:1 and in first-angle orthographic projection the following assembled views:

- 4.1 A full sectioned front view on A-A. Show THREE faces of the nuts by using the construction method.
- 4.2 An outside right view. No hidden detail is required.
- 4.3 Insert THREE important dimensions in each view.
- 4.4 Print the title and scale in the title block.
- 4.5 Show the projection symbol for the projection system used in the space provided.

| PARTS LIST |             |          |
|------------|-------------|----------|
| ITEM       | NAME        | QUANTITY |
| A          | PULLEY      | 1        |
| B          | PIVOT PIN   | 1        |
| C          | COVER PLATE | 2        |
| D          | PULLEY PIN  | 1        |
| E          | WASHER      | 2        |
| F          | M10 NUT     | 2        |
| G          | LOCKING PIN | 2        |

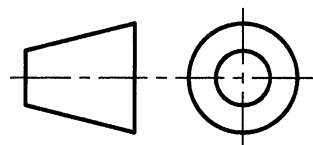
**VRAAG 4**

Figuur 4.1 toon 'n halvesnit-, uitskuif-isometriese aansig van 'n **KATROL-SAMESTELLING**.  
Figuur 4.2 toon die komponente van die **KATROL-SAMESTELLING**.

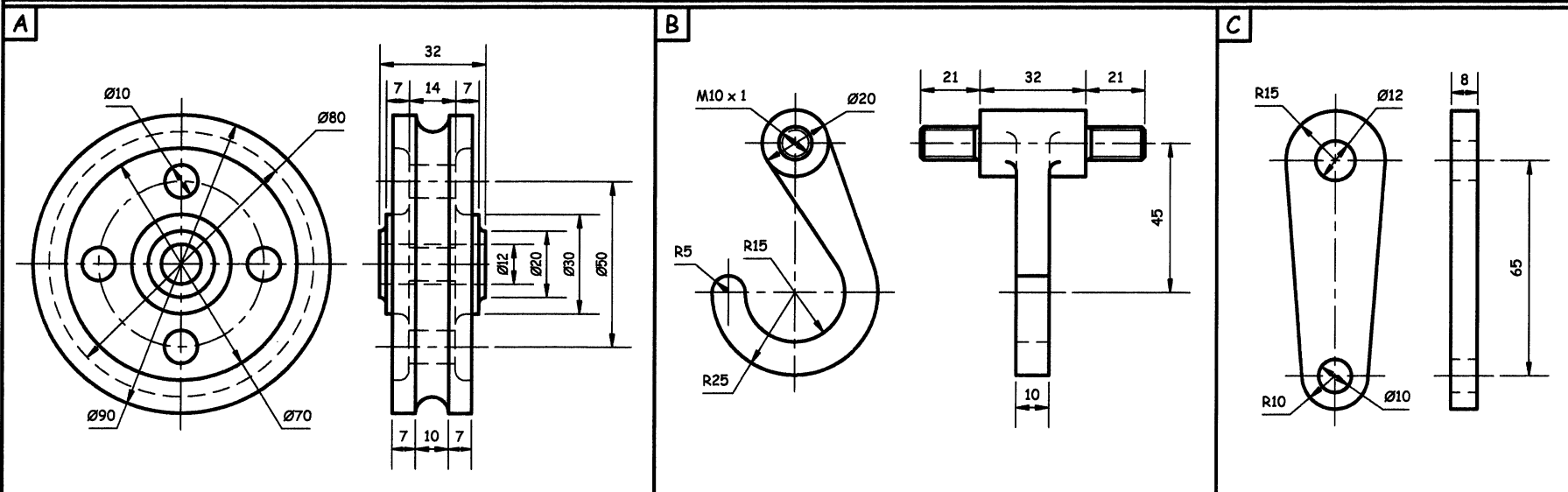
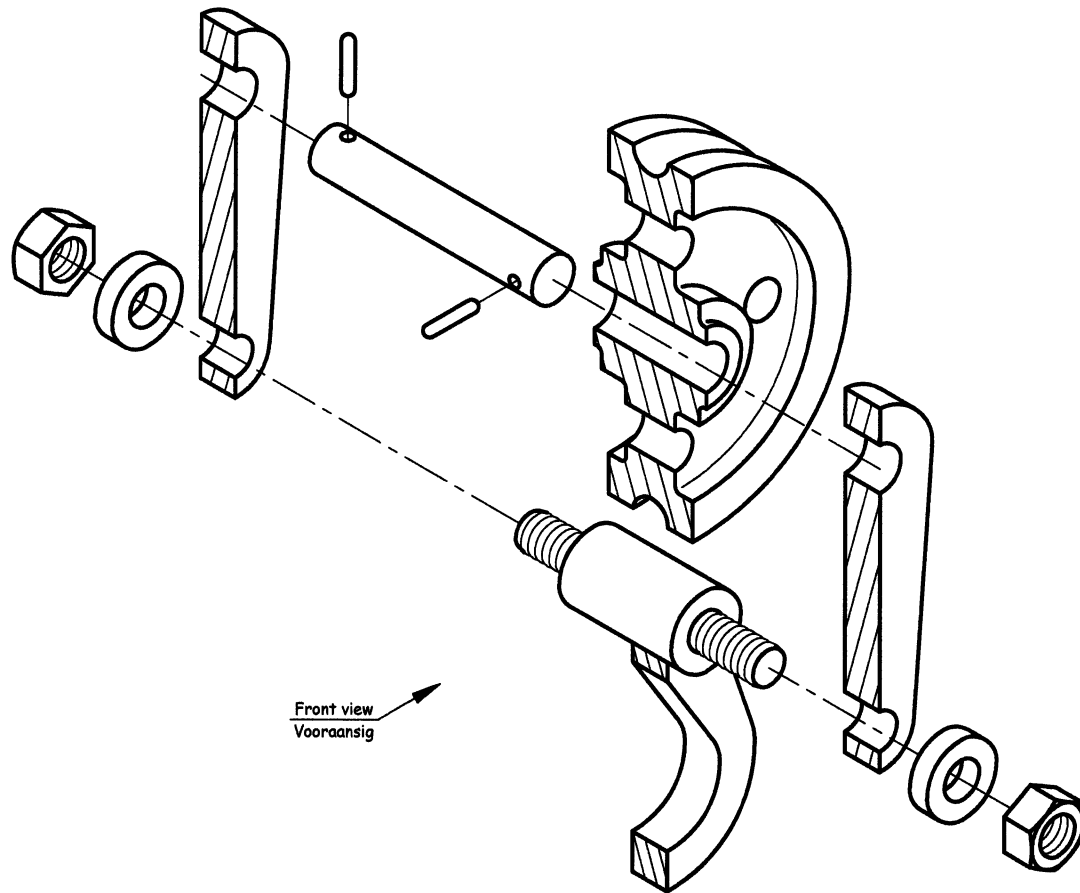
Gebruik die gegewe senterlyne (hartlyne) op **ANTWOORDVEL 4** en teken volgens 'n skaal van 1:1 en in eerstehoekse ortografiese projeksie die volgende saamgestelde aansigte:

- 4.1 'n Volsnit-vooraansig op A-A. Toon DRIE vlakke van die moere met die konstruksiemetode.
- 4.2 'n Buite regter-aansig. Geen verborge detail hoef getoon te word nie.
- 4.3 Toon DRIE afmetings in elke aansig.
- 4.4 Drukskrif die titel en skaal in die blok daarvoor voorsien.
- 4.5 Toon die projeksiesimbool vir die projeksiesistelsel in die ruimte wat daarvoor voorsien is.

| ONDERDELE LYS |           |             |
|---------------|-----------|-------------|
| ITEM          | NAAM      | HOEVEELHEID |
| A             | KATROL    | 1           |
| B             | SPIL-AS   | 1           |
| C             | DEKPLAAT  | 2           |
| D             | KATROL-AS | 1           |
| E             | WASTER    | 2           |
| F             | M10-MOER  | 2           |
| G             | BORGPEN   | 2           |



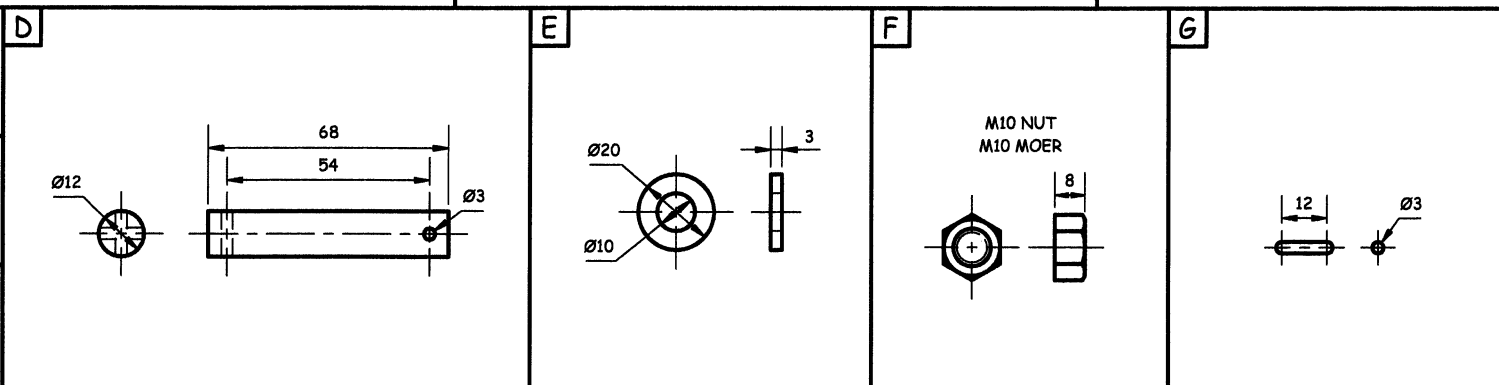
**FIG 4.1**



**FIG 4.2**

PULLEY ASSEMBLY  
SCALE 1:1

KATROL SAMESTELLING  
SKAAL 1:1



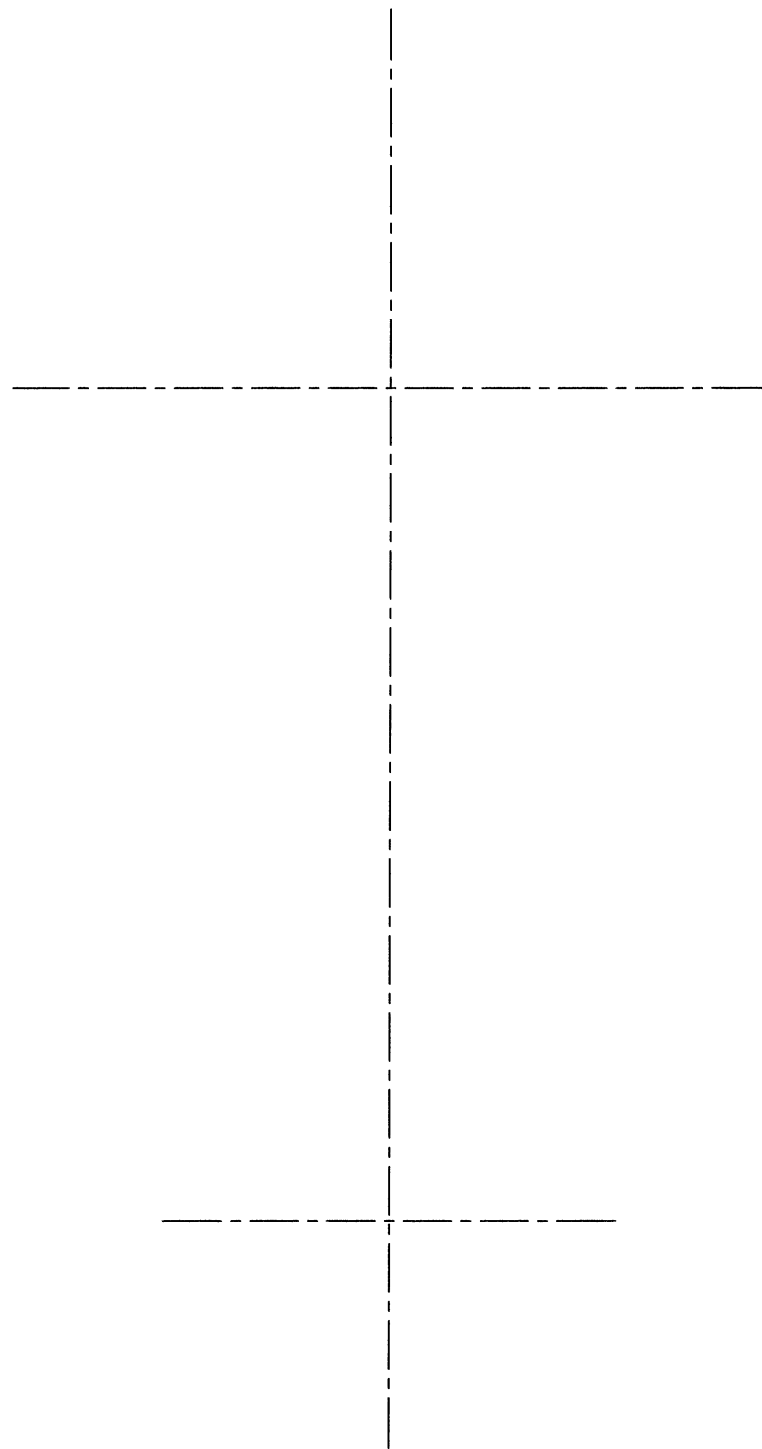
EXAM NUMBER:  
EKSAMENNOMMER:

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

TECHNICAL DRAWING STANDARD GRADE  
TEGNIESE TEKENE STANDAARDGRAAD

SG 711 - 2 Y  
SG 711 - 2 Y

DIAGRAM SHEET 1  
DIAGRAMVEL 1



|                                     |           |  |  |
|-------------------------------------|-----------|--|--|
| <b>FRONT VIEW<br/>VOORAANSIG</b>    |           |  |  |
| PART A                              | 12        |  |  |
| PART B                              | 12        |  |  |
| PART C                              | 8         |  |  |
| PART D                              | 3         |  |  |
| PART E                              | 4         |  |  |
| PART F                              | 6         |  |  |
| PART G                              | 4         |  |  |
| <b>TOTAL / TOTAAL</b>               | <b>49</b> |  |  |
| <b>RIGHT VIEW<br/>REGTER-AANSIG</b> |           |  |  |
| PART A                              | 3         |  |  |
| PART B                              | 3         |  |  |
| PART C                              | 2         |  |  |
| PART D                              | 1         |  |  |
| PART E                              | 1         |  |  |
| PART F                              | 3         |  |  |
| PART G                              | 1         |  |  |
| <b>TOTAL / TOTAAL</b>               | <b>14</b> |  |  |
| <b>49 + 14 = 63</b>                 | <b>63</b> |  |  |
| <b>ASSEMBLY<br/>SAMESTELLING</b>    | <b>2</b>  |  |  |
| <b>DIMENSIONS<br/>AFMETINGS</b>     | <b>3</b>  |  |  |
| <b>LINEWORK<br/>LYNWERK</b>         | <b>3</b>  |  |  |
| <b>TITLE<br/>TITEL</b>              | <b>2</b>  |  |  |
| <b>SYMBOL<br/>SIMBOOL</b>           | <b>2</b>  |  |  |
| <b>TOTAL<br/>TOTAAL</b>             | <b>75</b> |  |  |

|                         |                                |  |
|-------------------------|--------------------------------|--|
| <b>SYMBOL / SIMBOOL</b> | <b>TITLE BLOCK / TITELBLOK</b> |  |
| _____                   |                                |  |

EXAM NUMBER:  
EKSAMENNOMMER:




TECHNICAL DRAWING STANDARD GRADE  
TEGNIесе TEKENE STANDAARDGRAAD

SG 711 - 2 Y  
SG 711 - 2 Y

ANSWER SHEET 4  
ANTWOORDVEL 4