higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

DRAWING OFFICE PROCEDURES AND TECHNIQUES

(Second paper)

NQF LEVEL 3

(12050713)

7 December 2020 (X-paper)
09:00–13:00

REQUIREMENT: A4 drawing sheets.

This question paper consists of 6 pages, 2 diagram sheets and 1 answer sheet.

337Q2N2007

Copyright reserved

TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Read all headings and instructions carefully.
2. Answer all the questions.
3. Read all the questions carefully.
4. Use only a black or blue pen.
5. Number the answers according to the numbering system used in this question paper.
6. The drawings, sketches and diagrams must be produced in pencil.
7. Freehand drawings, sketches and/or diagrams must be neat, reasonably large, in proportion and fully labelled.
8. Rule off across the page after each completed question.
9. All work you do not want to be marked must be clearly crossed out.
10. All the abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS)-codes.
11. Write neatly.

Copyright reserved

QUESTION 1

Read the following questions carefully and write the answers (1.1.1–1.1.4) on the ANSWER SHEET:

1.1 What do the following computer glossary terms mean?

1.1.1 Entity

1.1.2 Analyst

1.1.3 Algorithm

1.1.4 Aspect ratio

(4 × 1) (4)

1.2 Draw the shapes shown in FIGURE 1 on an A4 sheet. In the title bar, supply your student number, the centre number, scale, date and question number. Use CAD software.

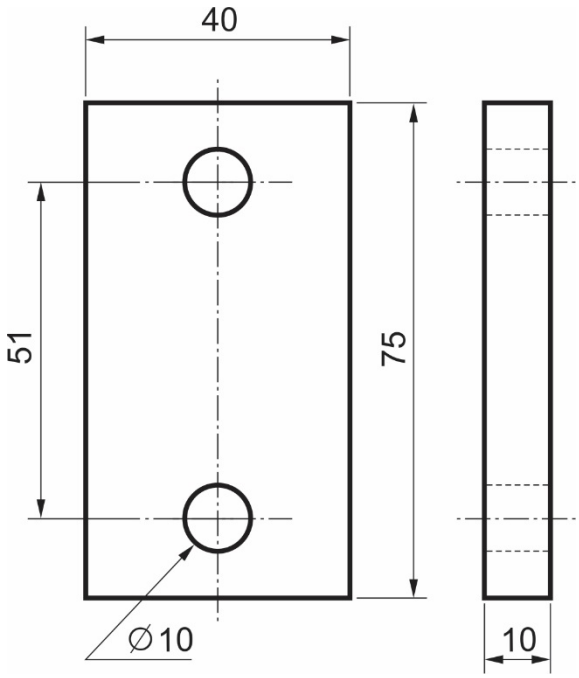


FIGURE 1 (4)

1.3 Which TWO commands are chosen to rotate an object? (2)

[10]

QUESTION 2

FIGURE 2, DIAGRAM SHEET 1 (attached) shows a representation of a bracket.

2.1 Draw an orthographic projection of the component using a CAD program, to a scale of 1:1 on an A4 drawing sheet. (15)

2.2 Include all dimensions on the drawing. (4)

2.3 In the title bar, provide your student number, the centre number, scale, date and question number. (3)

2.4 Plot the drawing and candidate information on an A4 sheet. (3)
[25]

QUESTION 3

FIGURE 3, DIAGRAM SHEET 1 (attached) shows a part sectional view of a pipe coupling in first-angle orthographic projection.

Draw to a scale of 1:4, using a CAD program, the following views of the components on an A4 sheet:

3.1 The two given views. (14)

3.2 Include all dimensions on the drawing. (6)

3.3 In the title bar, provide your student number, the centre number, scale, date and question number. (4)

3.4 Plot the drawing and candidate information on an A4 sheet. (4)

3.5 Insert the correct orthographic projection symbol. (2)
[30]

Copyright reserved

QUESTION 4

FIGURE 4, DIAGRAM SHEET 2 (attached) shows an isometric view of a component. All hidden lines are included.

Draw to a scale of 1:2, in first-angle orthographic projection and using a CAD program, the following views of the component on an A4 sheet:

Include all hidden lines and dimensions.

4.1	The front view as seen in the direction of the arrow A.	(10)
4.2	The right view.	(10)
4.3	The top view.	(10)
4.4	In the title bar, provide your student number, the centre number, scale, date and question number.	(1)
4.5	Plot the drawing and candidate information on an A4 sheet.	(3)
4.6	Insert the correct orthographic projection symbol.	(1)
		[35]

TOTAL: 100

Copyright reserved

DIAGRAM SHEET 1

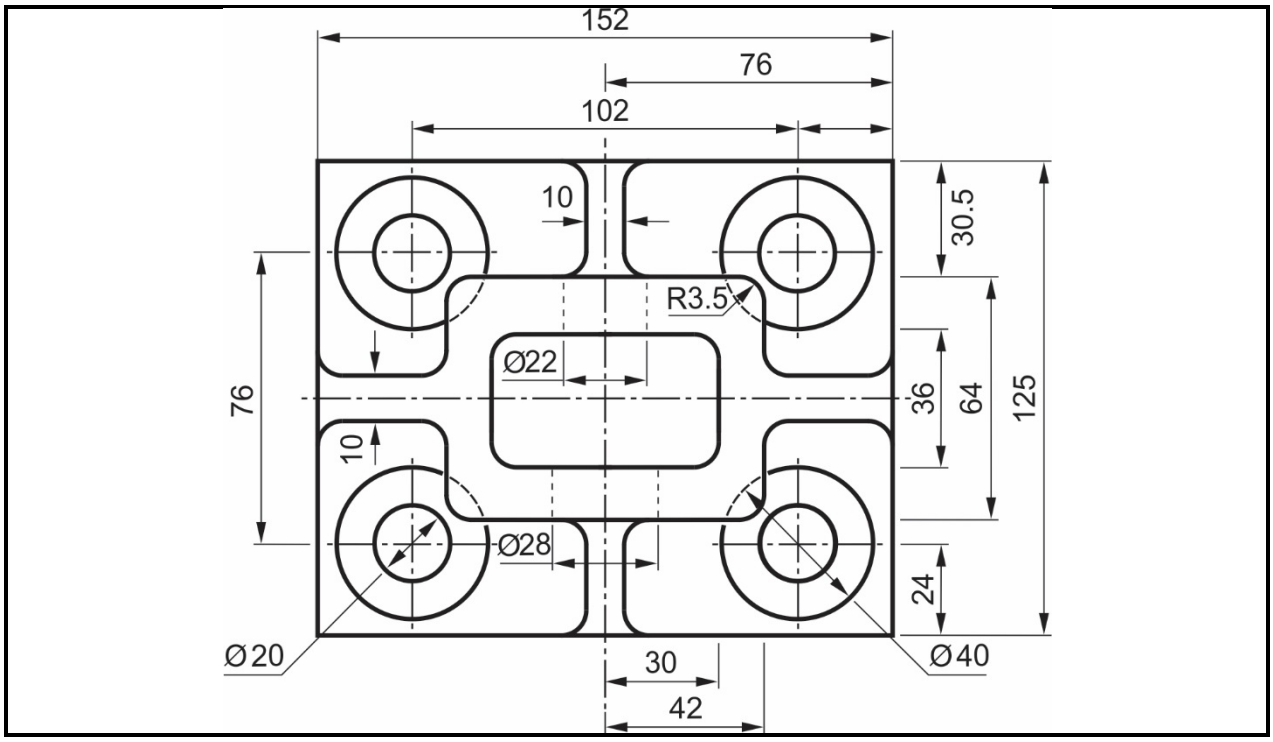


FIGURE 2

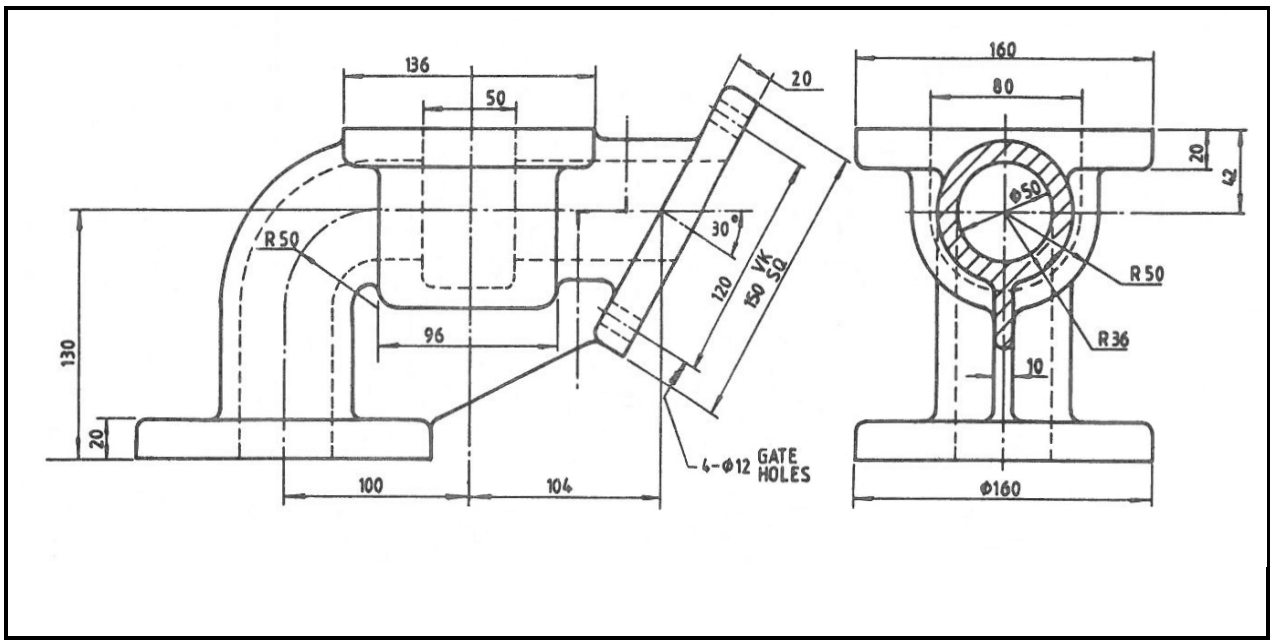


FIGURE 3

Copyright reserved

DIAGRAM SHEET 2

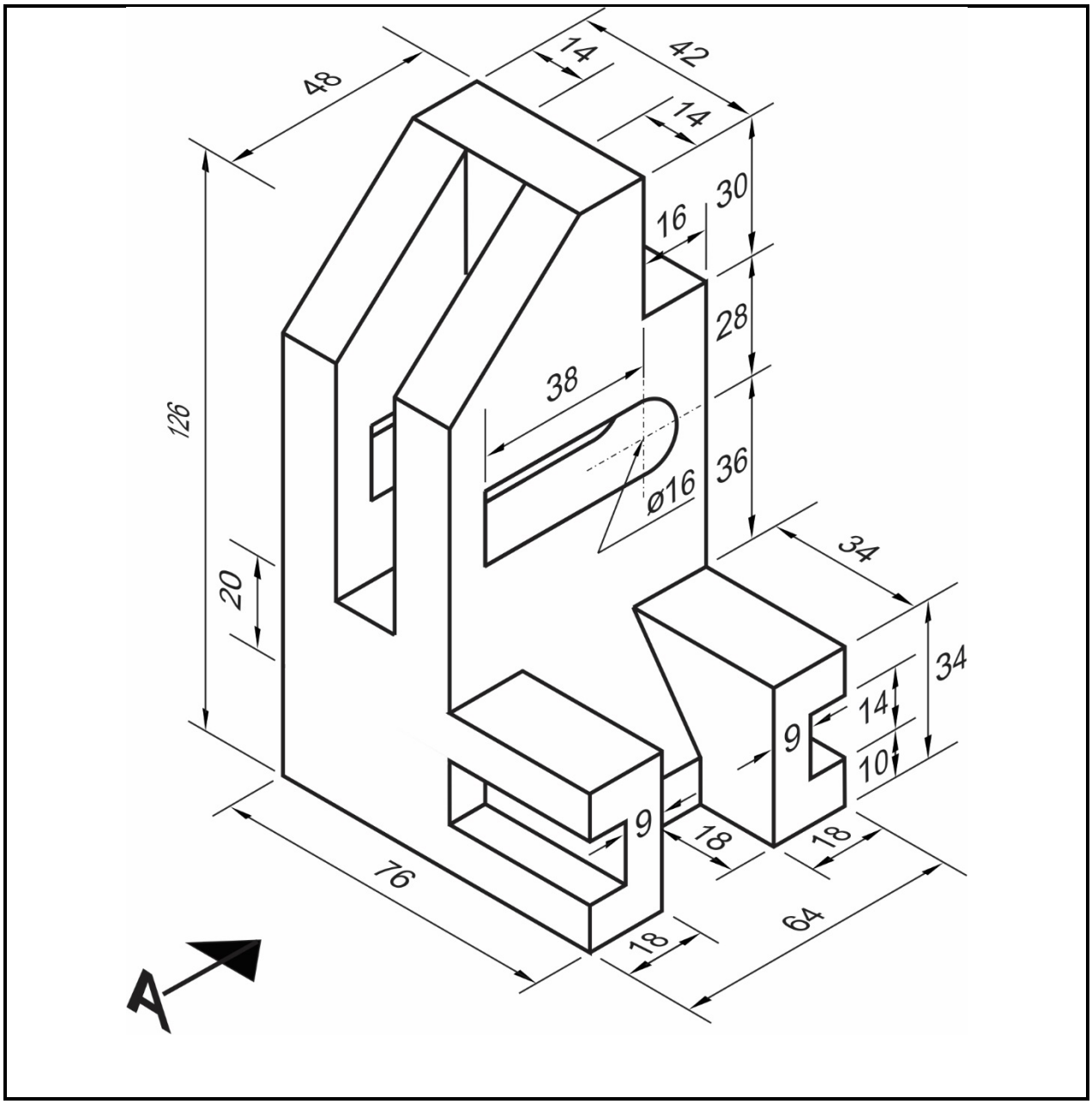


FIGURE 4

Copyright reserved

EXAMINATION NUMBER:

CENTRE NUMBER:

ANSWER SHEET

1.1 1.1.1

1.1.2

1.1.3

1.1.4

(4 × 1) (4)

1.3

(2)

HAND IN WITH THE DRAWING PAPERS

Copyright reserved