higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

ENGINEERING DRAWING N2

19 JULY 2018

This marking guideline consists of 9 pages.

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INSTRUCTIONS AND INFORMATION

1. To ALL marking centre managers: copying and transferring of drawings from CAD to MS Word may affect the accuracy of drawings.

2. Therefore ALL markers must have a fully completed marking guideline to use in the marking process.

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QUESTION 1: THREAD FASTENERS, WELDING PROCESSES AND DRAWING ABBREVIATIONS

1.1 1.1.1 BUTT JOINT
1.1.2 EDGE JOINT
1.1.3 T-JOINT
1.1.4 CORNER JOINT
1.1.5 LAP JOINT

(5 × 1 marks) (5)

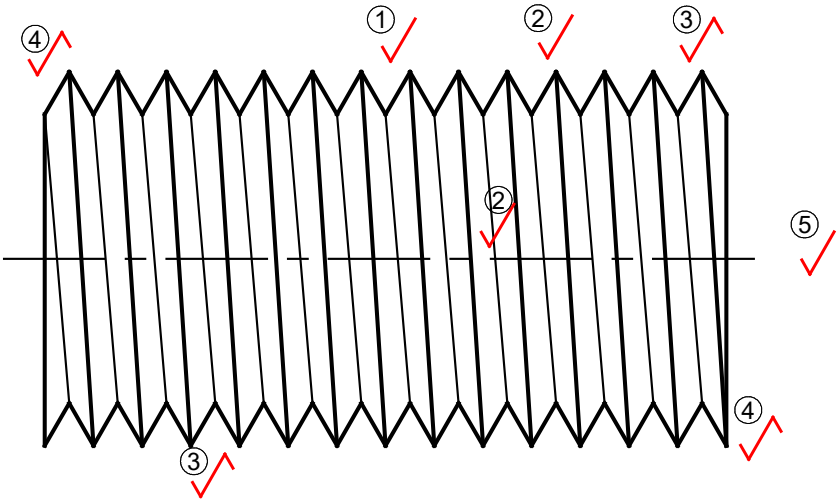
1.2
- LOCK NUT
- SLOTTED NUT
- SPRING WASHER
- SIMMONDS NUT
- CASTLE NUT
- TAB WASHER

(6 × 1 marks) (6)

1.3 1.3.1 D
1.3.2 0,7D
1.3.3 0,2D
1.3.4 0,8D
1.3.5 0,5D

(5 × 1 marks) (5)
[16]

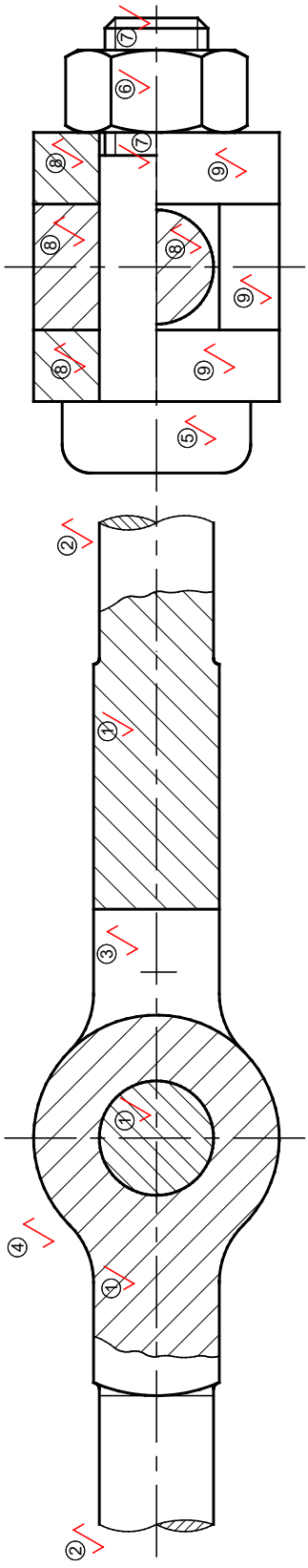
QUESTION 2: SCREW THREADS



MARKING CRITERIA			
	DIRECTION	①	1
CORRECTNESS	DETAIL OF THREAD (ROOT & CREST)	②	2
	THREAD ANGLE 60°	③	1
	START AND END	④	1
	HORIZONTAL POSITION	⑤	1
LINE WORK			2
ACCURACY			1
LAYOUT AND NEATNESS			1
		TOTAL	`10

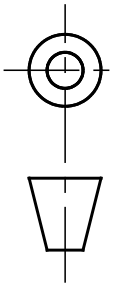
[10]

QUESTION 3: FIRST-ANGLE ORTHOGRAPHIC PROJECTION



KNUCKLE JOINT

SCALE 1:2



MARKING CRITERIA			
FRONT VIEW	CORRECTNESS	① HATCHING	3
		② "CUT" OF FORKED END AND EYE END	1
		③ PART NOT SECTIONED	½
		④ PROFILE: FILLETED OUTLINE	½
	LINE WORK		2
	ACCURACY		1
LEFT VIEW	CORRECTNESS	⑤ BOLT HEAD	½
		⑥ NUT	1
		⑦ THREAD BEFORE AND AFTER NUT	2
		⑧ PARTS HATCHED	2
		⑨ PARTS NOT SECTIONED	1½
	LINE WORK		2
	ACCURACY		2
PRINTING OF TITLE AND SCALE			2
ORTHOGRAPHIC PROJECTION SYMBOL			1
LAYOUT AND NEATNESS			1
			TOTAL 23

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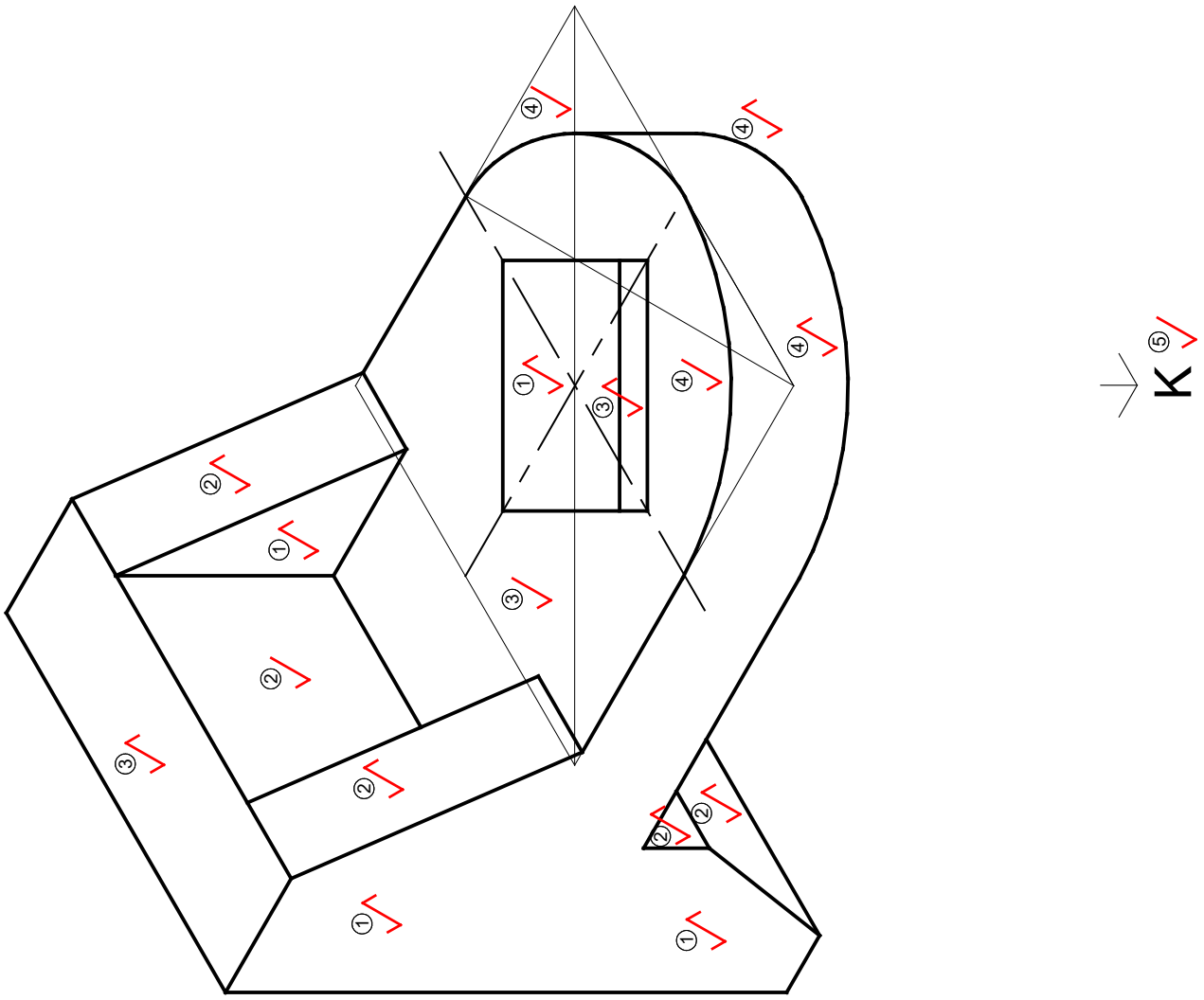
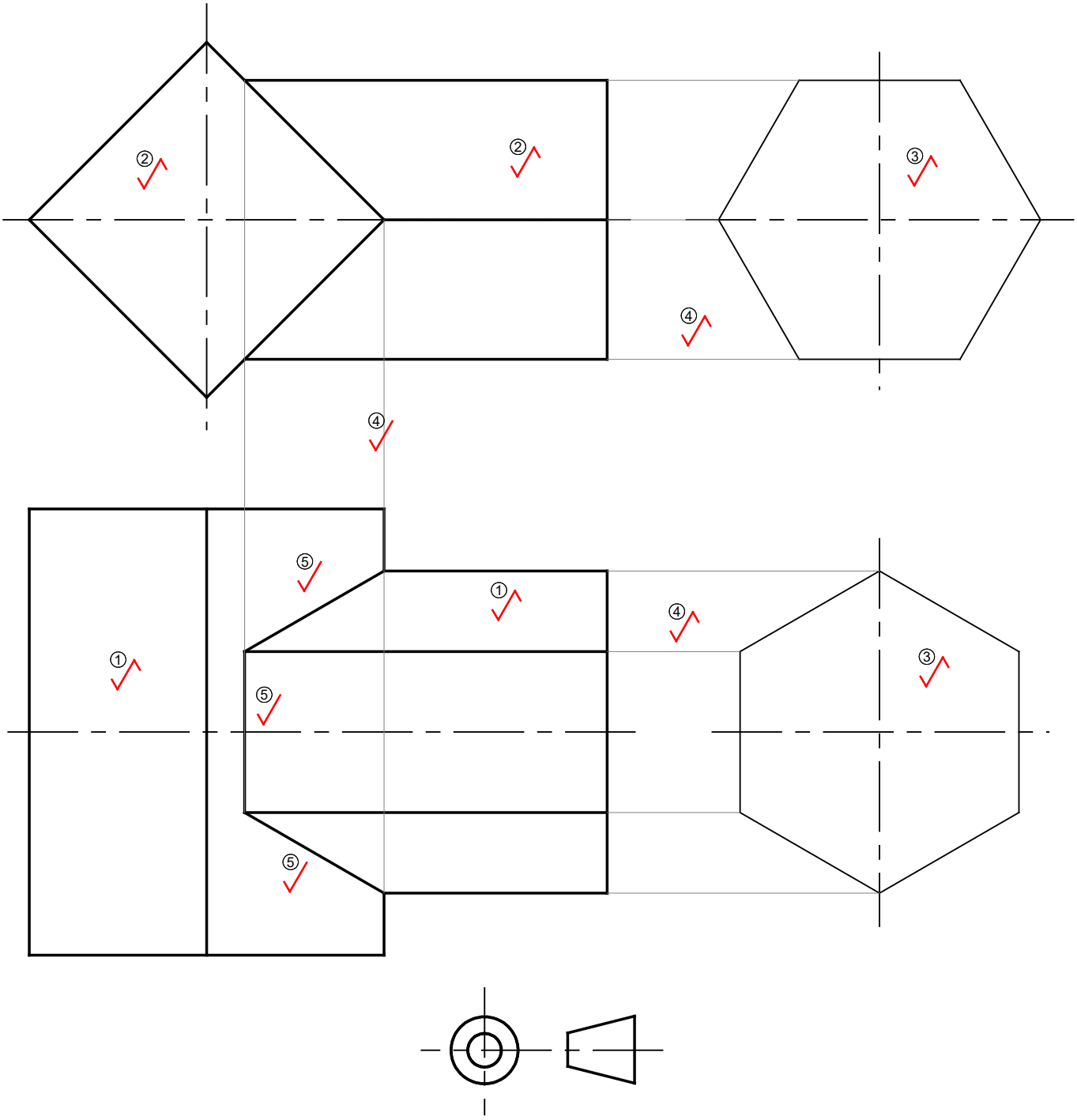
QUESTION 4: ISOMETRIC

MARKING CRITERIA			
CORRECTNESS	LEFT PLANE	①	2
	FRONT PLANE	②	3
	TOP PLANE	③	2
	SEMI-CIRCLES	④	3
POINT K		⑤	1
LINE WORK			2
ACCURACY			1
LAYOUT AND NEATNESS			1
		TOTAL	15



[15]

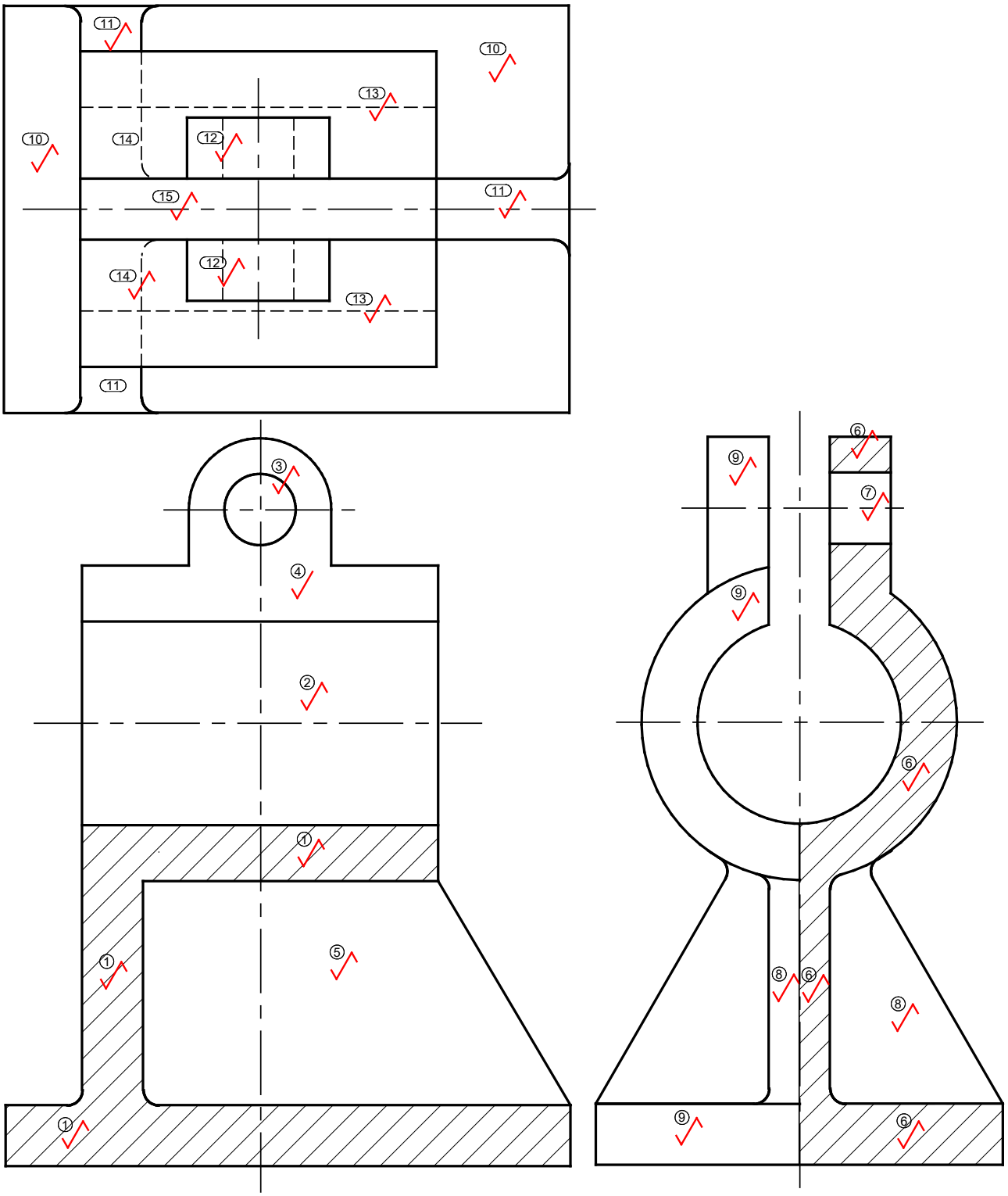
QUESTION 5: INTERPENETRATION



MARKING CRITERIA			
CORRECTNESS	FRONT VIEW	①	1
	TOP VIEW	②	1
	AUXILLIARY VIEWS	③	1
CONSTRUCTION LINES FOR CURVE		④	2
INTERPENETRATION CURVE		⑤	3
LINE WORK			2
ACCURACY			1
LAYOUT AND NEATNESS			1
		TOTAL	12

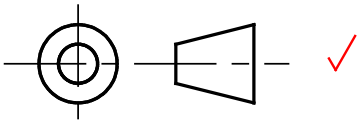
[12]

QUESTION 6: THIRD-ANGLE ORTHOGRAPHIC PROJECTION AND MACHINE SYMBOLS



CASTING ✓

SCALE 1:1 ✓



	MARKING CRITERIA			
FRONT VIEW	CORRECTNESS	HATCHING	①	1½
		Ø40 HOLE	②	½
		Ø14 HOLE	③	½
		AREA NOT SECTIONED	④	1
		WEB	⑤	½
	LINE WORK			1
	ACCURACY			1
RIGHT VIEW	CORRECTNESS	HATCHING	⑥	2
		Ø14 HOLE	⑦	½
		WEB	⑧	1
		AREA NOT SECTIONED	⑨	1½
	LINE WORK			1
	ACCURACY			1
TOP VIEW	CORRECTNESS	BASE	⑩	1
		WEBS	⑪	1
		Ø14 HIDDEN DETAIL & PROFILE	⑫	1
		Ø40 HIDDEN DETAIL & PROFILE	⑬	1
		HIDDEN DETAIL WEB (Top & bottom)	⑭	½
		GAP	⑮	½
	LINE WORK			1
	ACCURACY			1
PRINTING OF TITLE AND SCALE CENTRALLY BENEATH LAYOUT				2
ORTHOGRAPHIC PROJECTION SYMBOL				1
LAYOUT AND NEATNESS				1
			TOTAL	24

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TOTAL: 100

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