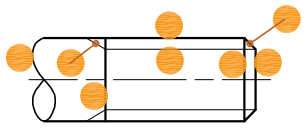
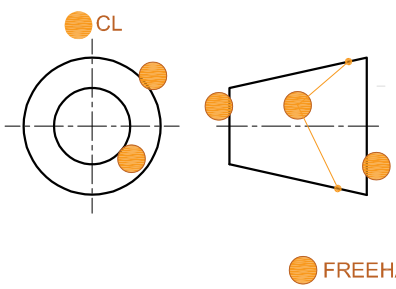
ANSWERS		
1	SHARK STREET	1
2	APPROVED	1
3	SCGG213	1
4	INTERRUPTED VIEW /	1
5	INDUCTION	1
6	REMOVED	1
7	PART / PARTIAL	1
8	B: R10 C: R4 D: 135 E: 2	4
9	36°, **37°**, 38°	1
10	2	1
11	ALTERNATIVE- / EXTREME POSITION	1
12	4	1
13	NOT TO SCALE	1
14	RIGHT VIEW	1
15	5	1
16	MIN = 7,9 & MAX = 8,23	2
17	MULTI-DIRECTIONAL	1
18	ROUGHNESS VALUE	1
19	*See below*	$4\frac{1}{2}$
20		$3\frac{1}{2}$
	TOTAL	**30**

ANSWER 19



ANSWER 20

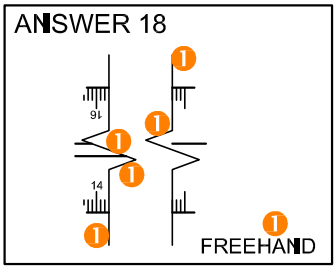


PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2023
MARKING GUIDELINES

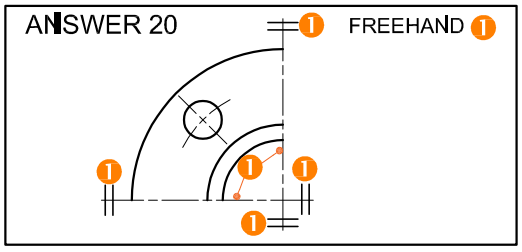
ANSWERS

1	LISA	1
2	DRAWING NUMBER	1
3	COMBINATION SQUARE	1
4	PRECISION TOOLS	1
5	20 °C	1
6	GLASS	1
7	3000	1
8	THIRD ANGLE	1
9	SECTIONAL RIGHT VIEW	1
10	MULTI PLANE / OFF SET	1
11	REVOLVED	1
12	REMOVED	1
13	C: 17 D: 111 E: 14	3
14	9	1
15	DETAIL T	1
16	KNURLING	1
17	103,025 (MAX.) 102,95 (MIN.)	2
18	*See below*	3
19	L / =	1
	G / N7	1
	J / HONE	1
	H / 2	1
20	*See below*	3
	TOTAL	**30**

ANSWER 18



ANSWER 20

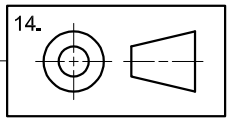


PAPER 2 QUESTION 1
GRADE 12
JUNE 2023
MARKING GUIDELINE

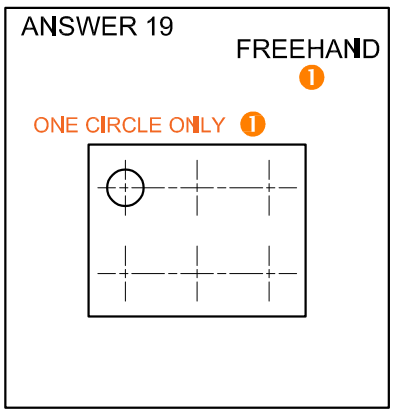
ANSWERS

1	S. SMITH	1
2	3	1
3	MILD STEEL	1
4	6	1
5	SUCCESSIVE / REMOVED	1
6	3	1
7	BOTTOM VIEW	1
8	ACROSS FLATS	1
9	CSK	1
10	A: 126 B: Ø28 C: 10	3
11	2	1
12	3	1
13	40	1
14	LEFT	1
15	M34 x 3	1
16	8	1
17	16.98	2
18	MACHINING ALLOWANCE / TOLERANCE	1
	ROUGHNESS VALUE	1
	METHOD / TREATMENT / COATING / PROCESS	1
	DIRECTION OF LAY / CIRCULAR / PATTERN	1
19	*See below*	3
20		3
	TOTAL	**30**

14.

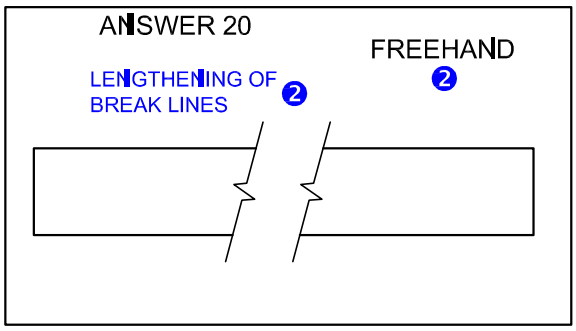


ANSWER 19



HORIZONTAL CLs without CIRCLES 2 x 0.5
VERTICAL CLs without CIRCLES 2 x 0.5

ANSWER 20

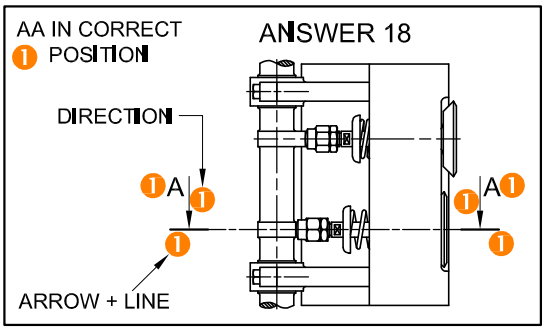


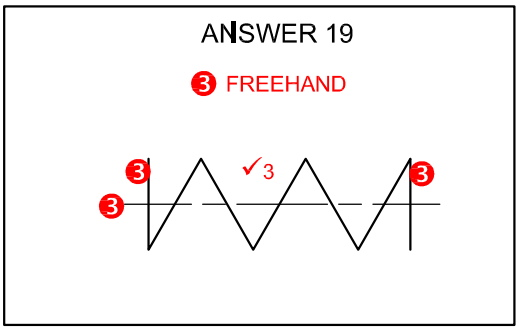
PARALLEL BREAK LINES 2 x 0.5
ZIG ZAG 2 x 0.5

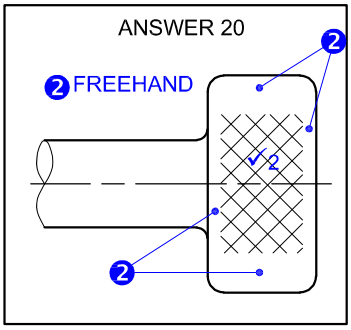
NOTE: BREAKLINES CAN BE ALIGNED or VERTICAL

PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2022
MARKING GUIDELINE

ANSWERS		
1	MC ENGINEERING WORKS	1
2	GERALD	1
3	4	1
4	02/04/2021	1
5	THIRD ANGLE	1
6	AUTOCAD 2021	1
7	M5	1
8	2	1
9	A: 7 B: R2 C: 15 D: R3 E: AF12	5
10	R15	1
11	FLAT FACE ON A SHAFT	1
12	INTERRUPTED VIEW/CONTINUES	1
13	GRINDING	1
14	39.81	1
15	5 mm	1
16	BOTTOM VIEW	1
17	11	1
18	*See below*	$3\frac{1}{2}$
19		3
20		$2\frac{1}{2}$
	TOTAL	**30**





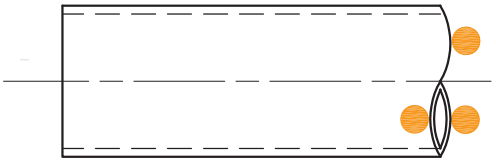


PAPER 2 QUESTION 1
GRADE 12
2022
MARKING GUIDELINES

ANSWERS		
1	CHECKING THE DRAWING	1
2	FILE NAME	1
3	CUT BOLT MANUFACTURERS	1
4	3	1
5	LEFT VIEW	1
6	2000	1
7	6	1
8	FLAT SURFACE / SQUARE ON A SHAFT / NOT ROUND	1
9	REVOLVED SECTION	1
10	A: 20 / Ø20 = $\frac{1}{2}$ B: 25 C: AF12 / Ø 12	3
11	24° / **25°** / 26°	1
12	135	1
13	1,2	1
14	*See below*	3
15	4	1
16	LAY/DIRECTION OF MACHINING/ PERPENDICULAR/90°	1
17	CIVIL HATCHING	1
18	7,79	1
19	P	1
	H	1
	G	1
	K	1
	L	1
20	*See below*	3
	TOTAL	**30**

ANSWER 14

ANSWER 20



✓1 INNER CURVES

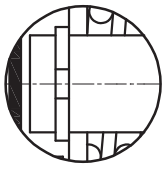
FREEHAND

PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

ANSWERS

1	REAR DERAILLEUR ASSEMBLY	1
2	SPEED STREET	1
3	3	1
4	MAFIKA	1
5	VBJW031	1
6	SECTIONAL RIGHT VIEW	2
7	*See below*	1
8	3	1
9	B: R5 C: 16 D: 20 E: 98	4
10	135°	1
11	17	1
12	KNURLING	1
13	ACROSS FLATS	1
14	REVOLVED SECTION	1
15	*See below*	3
16	ALIGNED SECTION	1
17	1.64	2
18	*See below*	3
19		3
	TOTAL	**30**

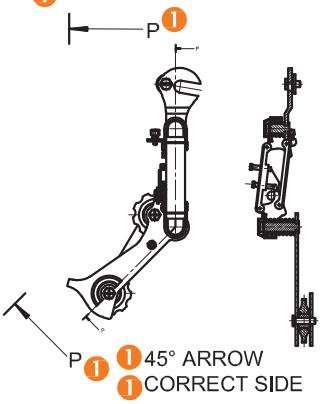
ANSWER 7



DETAIL Z

ANSWER 15

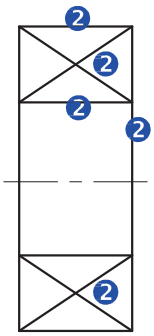
1 0° ARROW
1 CORRECT SIDE



1 45° ARROW
1 CORRECT SIDE

ANSWER 18

2 FREEHAND



ANSWER 19

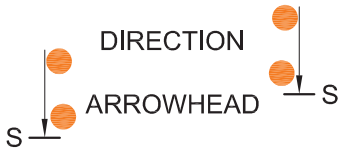
4 FREEHAND
4 PROPORTION

4 S-S

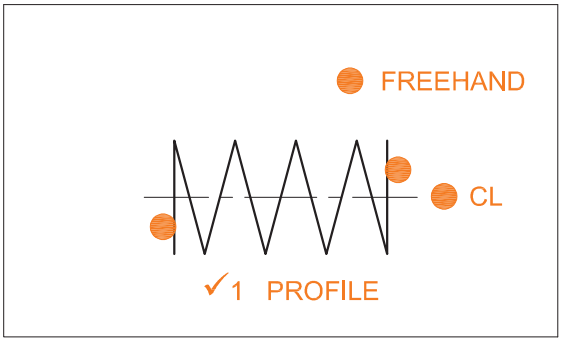
PAPER 2 QUESTION 1
GRADE 12
2021
MARKING GUIDELINE

ANSWER		
1	TWO-LEVER DOOR LOCK	1
2	SIPO	1
3	2018/09/14	1
4	DL 04	1
5	3	1
6	13 / 10	1
7	PERSPEX	1
8	BOTTOM VIEW	1
9	A: 134 B: Ø 5 C: 24 D: 88 E:2	5
10	134°, **135°**, 136°	1
11	SYMMETRY	1
12	INTERRUPTED VIEW	1
13	MULTI PLANE / OFFSET SECTION	1
14	*See below*	2
15	□9	1
16	7	1
17	CROSSED	1
18	10,29	2
19	*See below*	3
20		3
	TOTAL	**30**

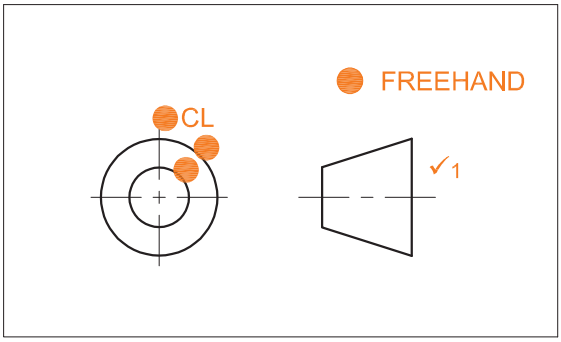
ANSWER 14:



ANSWER 19: Conventional representation for a coil spring



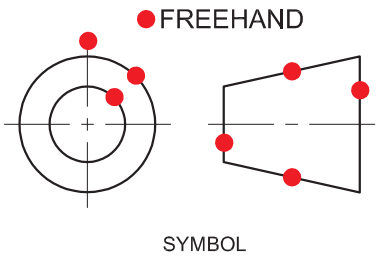
ANSWER 20: Projection symbol



PAPER 2 QUESTION 1
GRADE 12
SC/NSC 2020
MARKING GUIDELINES

ANSWERS			
1	TO CHECK THE DRAWING		1
2	www.foundry.co.za		1
3	MJIG-12-V5		1
4	JR MANUFACTURES		1
5	30		1
6	SECTIONAL FRONT VIEW ON T-T		2
7	REMOVED SECTION		1
8	OFFSET or MULTI-PLANE		1
9	A: R4 B: 15 C: 12 D: 84 E: Ø7		5
10	199		1
11	WEB or RIB		1
12	18 mm		1
13	COUNTER BORE		1
14	8		1
15	HATCHING IN OPPOSITE DIRECTIONS		2
16	30.85		1
17	DIRECTION OF LAY	d	4
	ROUGHNESS VALUE	a	
	SAMPLING LENGTH	c	
	MACHINING ALLOWANCE	e	
18	*See below*		4
		TOTAL	**30**

ANSWER 18



SYMBOL

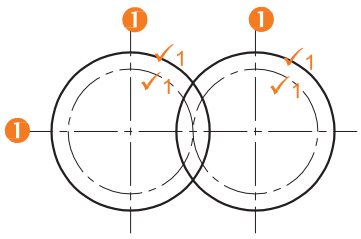
PAPER 2 QUESTION 1
GRADE 12
NSC 2019
MARKING GUIDELINE

ANSWERS

1	COMPASS		1
2	WESSLY		1
3	TOOL STEEL		1
4	16		1
5	RIGHT VIEW		1
6	MORE ACCURATE ADJUSTMENT/REMAINS ACCURATE		1
7	QUICK RELEASE FOR EASIER or QUICKER OPENING / CLOSING OF THE LEGS		1
8	Ø 78		1
9	12°, **13°**, 14°		1
10	C: M3 D: 156		2
11	REVOLVED SECTION		1
12	STRAIGHT KNURLING / KNURLING / GROOVED		1
13	BETTER GRIP		1
14	0.92		1
15	FIELD/SITE WELD	E	5
	TAIL	C	
	WELD LENGTH	A	
	WELD PITCH	B	
	WELD PROCESS	D	
16	*See below*		6
17			4
		TOTAL	**30**

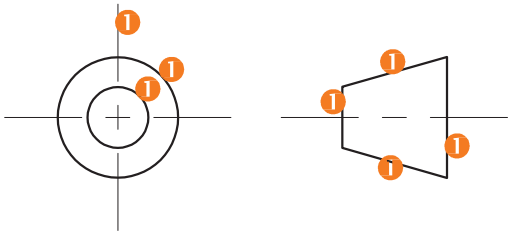
ANSWER 16:
Convention for gears meshing

1 FREEHAND



ANSWER 17: Projection symbol

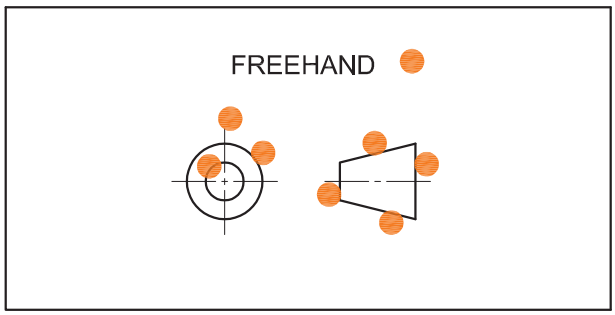
1 FREEHAND



PAPER 2 QUESTION 1
GRADE 12
SC/NSC 2019
APPROVED
MARKING GUIDELINE

ANSWERS		
1	WENDY	1
2	2018-02-10	1
3	APPROVING THE DRAWING	1
4	MC 25-V2018	1
5	TUNGSTEN	1
6	8	1
7	20 °C	1
8	25 or 25,00	1
9	REPRESENTING A PART NOT THERE	1
10	SHAFT CONTINUES/PART OF SHAFT	1
11	CIRCLES OR ARCS - SHAFTS - SYMMETRY - PCD - POSITION - A PLANE	2
12	3	1
13	FRONT VIEW	1
14	C: 139 ✓ D: Ø15,85 ✓✓ E: Ø18 ✓✓	5
15	84°	1
16	REVOLVED SECTION	1
17	PART SECTION	1
18	SUCCESSIVE SECTIONS	2
19	2,9 mm	2
20	*See below*	4
	TOTAL	**30**

ANSWER 21

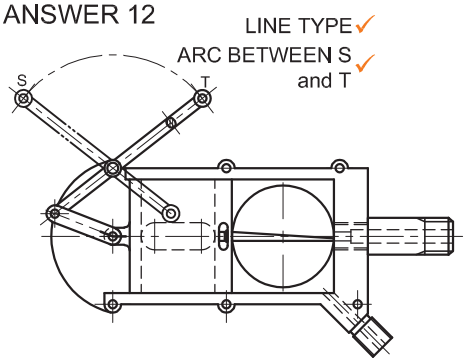


PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2018
MARKING GUIDELINE

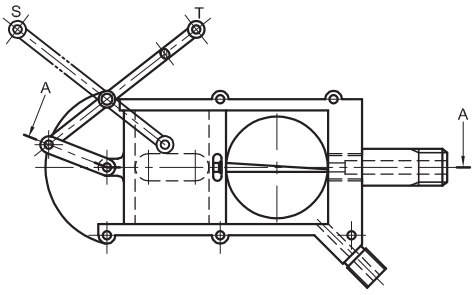
ANSWERS

1	1 VISCOUNT STREET		1
2	BR2018		1
3	ROLI		1
4	CAD		1
5	R 2		1
6	BRASS		1
7	24		1
8	ROUND / CIRCLE		1
9	REVOLVED SECTION		1
10	SECTIONAL TOP VIEW		1
11	8		1
12	*See below*		2
13	C: 26 D: Ø36 E: 23		3
14	LONGITUDINAL SECTION / SHAFT / PIN		1
15	SLIDE, E-CLIP, THROTTLE NEEDLE		3
16	DIRECTION OF LAY	d	1
	MACHINING ALLOWANCE	e	1
	PRODUCTION METHOD	b	1
	ROUGHNESS VALUE	a	1
17	*See below*		3
18			3
	TOTAL		**30**

ANSWER 12



ANSWER 17: SECTION A-A

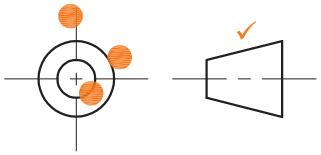


SECTION A-A MARK ALLOCATION

- LEFT ARROW PLACEMENT	1
- RIGHT ARROW PLACEMENT	1
- PERPENDICULAR TO CL	1
TOTAL	3

ANSWER 18: PROJECTION SYMBOL

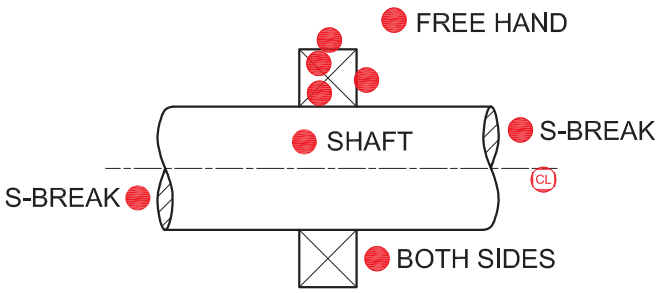
FREEHAND



PAPER 2 QUESTION 1
GRADE 12
SCE 2018
MARKING GUIDELINES

ANSWERS		
1	SHIFTING SPANNER	1
2	1 : 1	1
3	AUTOCAD 2017	1
4	2017-01-08	1
5	STEYN	1
6	R2	1
7	TOOL STEEL	1
8	HARDENING	1
9	THIRD ANGLE PROJECTION	1
10	128	1
11	79° WITH A VARIANCE OF 1° EITHER WAY	1
12	TO SET AT A SPECIFIC SIZE/ TO VERIFY OR DETERMINE A SPECIFIC SIZE/ JAW OPENING SIZE	2
13	PARTIAL SECTION	1
14	REVOLVED SECTION	1
15	BETTER GRIP/TURN EASIER	1
16	REAR VIEW/BACK VIEW	1
17	SHOW DETAIL	1
18	ALIGNED SECTION	1
19	3.75	2
20	7	1
21	PERPENDICULAR	1
22	*See below*	5
	TOTAL	**28**

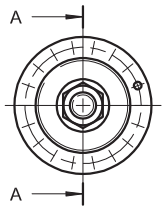
ANSWER 22: Conventional representation of a bearing on a section of a shaft

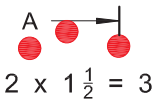


PAPER 2 QUESTION 1
GRADE 12
November 2017
MARKING GUIDELINES

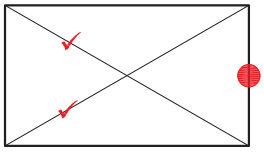
ANSWERS		
1	REAR WHEEL HUB	1
2	AUTOCAD	1
3	SCALE 2 : 3	1
4	JOHN	1
5	BF 71116	1
6	CHROME PLATING	1
7	EN 19	1
8	25	1
9	RIGHT VIEW	1
10	A: 50 B: 6 C: 18 D: M36	4
11	PITCH CIRCLE DIAMETER	1
12	ACROSS FLATS	1
13	SYMMETRY	1
14	PART SECTION	1
15	SPACER	1
16	MILLING	1
17	4	2
18	36	1
19	99.65	2
20	*See below*	3
21		3
	TOTAL	**30**

ANSWER 20 - SECTION A-A





ANSWER 21 - CONVENTION FOR A SQUARE OR A FLAT FACE



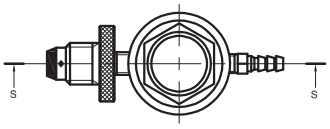
FREEHAND

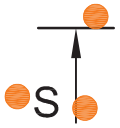
FOR OUTLINES

PAPER 2 QUESTION 1
GRADE 12
SCE 2017
MARKING GUIDELINES

ANSWERS		
1	GAS REGULATOR	1
2	www.theonegas.co.za	1
3	MILLING	1
4	AUTOCAD 2016	1
5	2015-10-31	1
6	SOON	1
7	RUBBER	1
8	FULL SECTIONED FRONT VIEW	1
9	FILLET	1
10	B: Ø 17.6 C: 125 D: 75	3
11	75°	1
12	THIN PART / RUBBER	1
13	PART SECTIONING	1
14	KNURLING	1
15	CAP	1
16	8	1
17	TO KEEP THE RUBBER PIPE IN POSITION	2
18	*See below*	3
19		3
20		4
	TOTAL	**30**

ANSWER 18

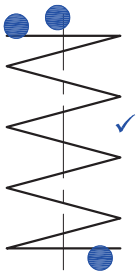




x 2

ANSWER 19: CONVENTION - COIL SPRING

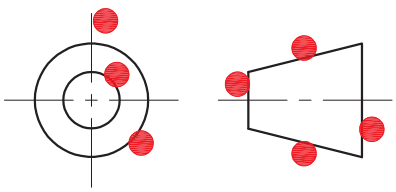
FREE HAND



✓ PROFILE

ANSWER 20: PROJECTION SYMBOL

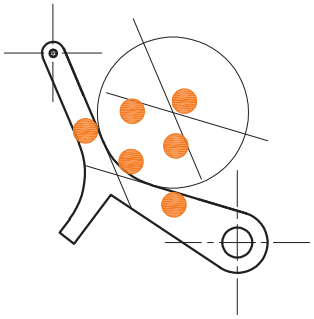
FREE HAND



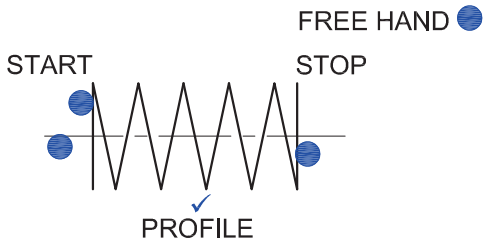
PAPER 2 QUESTION 1
GRADE 12
Feb./Mar. 2017
MEMORANDUM

ANSWERS		
1	TO CHECK THE DRAWING	1
2	CAD / AUTOCAD	1
3	1 : 1	1
4	R 3	1
5	STAINLESS STEEL	1
6	CHAMFER	1
7	KNURLING	1
8	(PARTIAL) RIGHT VIEW	1
9	C: Ø12 D: 86 E: 34	3
10	9	1
11	SHOW DETAIL	1
12	6	1
13	PARALLEL	1
14	M4 x 0,8	2
15	8,25	2
16	DOWEL PIN	1
17	*See below*	3
18		3
19		4
	TOTAL	**30**

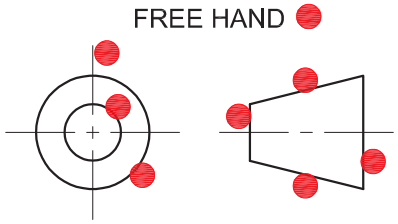
ANSWER 17:
Construction



ANSWER 18:
Convention for coil spring



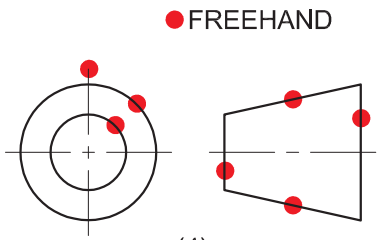
ANSWER 19:
Projection symbol



PAPER 2 QUESTION 1
GRADE 12
November 2016
MEMORANDUM

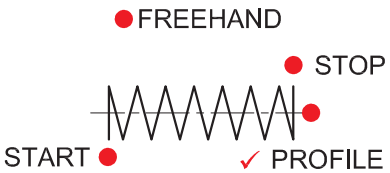
ANSWERS		
1	13/03/15	1
2	VELDDRIFT	1
3	METRIC / MILLIMETRE	1
4	TEMPER	1
5	punch3.dwg	1
6	CAST IRON	1
7	22/04/15	1
8	8	1
9	MULTI PLANE / STEPPED / OFFSET SECTION	1
10	A: 36 B: 70 C: 27 D: AF7,5 / Ø7,5	4
11	GRUB SCREW	1
12	REVOLVED SECTION	1
13	4	1
14	7	1
15	TO STOP THE SPRING FROM SHOOTING OUT OF THE SHAFT / STOP THE SHAFT FROM FALLING OUT	2
16	Ø 3.8	2
17	Ø 4.25	2
18	*See below*	4
19		3
	TOTAL	**30**

ANSWER 18



(4)

ANSWER 19

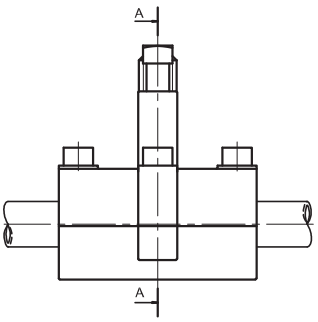


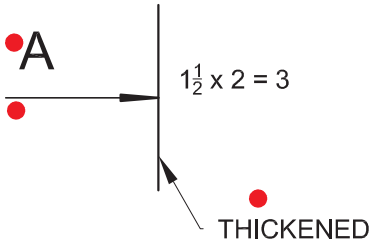
(3)

PAPER 2 QUESTION 1
GRADE 12
DBE/Feb.-Mar. 2016
MEMORANDUM

ANSWERS		
1	TAPPING VALVE	1
2	2015/01/05	1
3	2015 - A - 005	1
4	SCALE 2 : 1	1
5	AUTOCAD	1
6	ANDREW BRAND	1
7	PEWTER	1
8	SECTIONAL FRONT VIEW	1
9	3	1
10	A : Ø 4 B : 4 C : 26	3
11	FILLET	1
12	PARTIAL SECTION	1
13	SPECIFIC PART HATCHING e.g. RUBBER or THIN PART	1
14	29	1
15	TO SHOW DETAIL	2
16	INTERRUPTED VIEW/CONTINUES	1
17	Ø6.35	2
18	Ø5.47	2
19	*See below*	3
20		4
	TOTAL	**30**

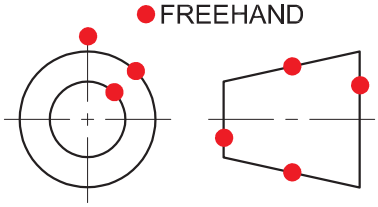
ANSWER 19





ANSWER 20

FREEHAND

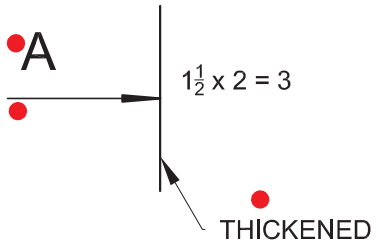


SYMBOL

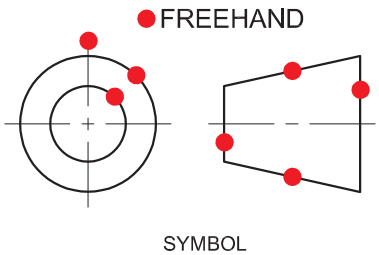
PAPER 2 QUESTION 1
GRADE 12
November 2015
MEMORANDUM

ANSWERS			
1	2014-03-03		1
2	BOX AND GLAND		1
3	SCALE 1 : 2		1
4	RUBBER		1
5	2014-02-03		1
6	BG-15/4		1
7	RIGHT VIEW		1
8	HALF SECTION		1
9	WASHER		1
10	STUD		1
11	SPOTFACE		1
12	S-BREAK		1
13	7		1
14	A - 100	B - Ø12	2
15	C - 21 - 3 = 18	D - 64 + (32-8) = 88	4
16	160.25		2
17	159.7		2
18			3
19			4
		TOTAL	**30**

ANSWER 18



ANSWER 19

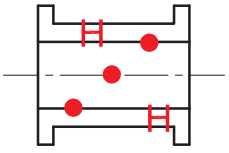


PAPER 2 QUESTION 1
GRADE 12
Feb.-Mar. 2015
MEMORANDUM

ANSWERS			
1	2013-11-04	1	
2	K CIZAKE	1	
3	01-NOV-13	1	
4	P. MOOLMAN	1	
5	Ø46	1	
6	NORMALISING	1	
7	MILLING	1	
8	± 0,3	1	
9		3	
10	OIL HOLE	1	
11	REVOLVED SECTIONED	1	
12	C 150° D 207 E 32	3	
13	0,8 x M12 = 9,6	2	
14	STUD	1	
15	MEASUREMENT LINE IS EXTENDED/CONTINUING TO THE TOTAL LENGTH OF 150 mm	1	
16	SYMMETRY	1	
17	7	1	
18	PREVENTING THE BEARING HALVES FROM SLIDING OUT	2	
19	KEY	2	
20		4	
	TOTAL	**30**	

ANSWER 9

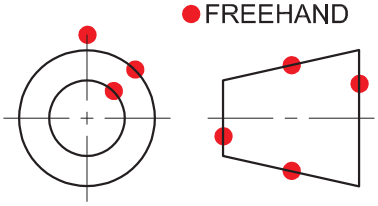
FREEHAND



NOTE: NO MARK ALLOCATE IF HATCHED

ANSWER 20

FREEHAND



SYMBOL

PAPER 2 QUESTION 1
GRADE 12
November 2014
MEMORANDUM

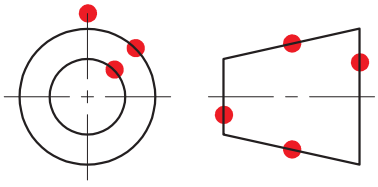
ANSWERS			
1	2013-09-02		1
2	PRETORIA		1
3	RUBBER		1
4	AFROX		1
5	ME21.dwg		1
6	SCALE 1 : 1		1
7	SECTIONAL FRONT VIEW		1
8	FILLET		1
9	FLAT SURFACE		1
10	152		1
11	8		1
12	D. 14 E. Ø 24 F. Ø 32		3
13	A	ALL-ROUND WELDING	1
	B	SQUARE WELDING	1
	C	FLAME/GAS WELD	1
14	SECURE HAND WHEEL TO SHAFT		1
15	24		1
16	HATCHING: [direction 1, spacing 1, thread 1]		3
17			3
18			4
	TOTAL		**29**

TOTAL: 29

ANSWER 17

ANSWER 18

FREEHAND

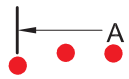


SYMBOL

PAPER 2 QUESTION 1
GRADE 12
EXEMPLAR 2014
MEMORANDUM

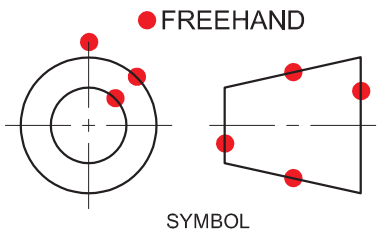
ANSWERS		
1	18000	1
2	ALUMINIUM	1
3	562 CB - SS.dwg	1
4	2013/10/12	1
5	GAUTENG	1
6	CENTRE LINE / CHAIN LINE	1
7	ROUND	1
8	32 mm	1
9	WEB/RIB	1
10	2,5 mm	1
11	70	1
12	60°	1
13	FULL	1
14	16	1
15	PITCH CIRCLE DIAMETER	1
16	6	1
17	CIRCULAR (C)	2
18	*(See below.)*	3
19	A. Ø76 B. 64 PCD C. M14 D. 10 E.16	5
20	*(See below.)*	4
	TOTAL	**30**

18



(● X 2) = 3

20

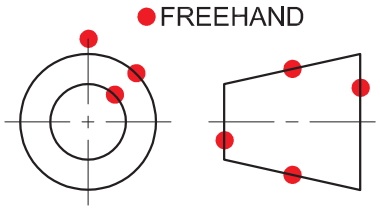


PAPER 2 QUESTION 1
GRADE 12
FEB. - MAR. 2014
MEMORANDUM

ANSWERS		
1	2013/05/12	1
2	PRECISION ENGINEERING	1
3	1 : 2	1
4	HARDENING	1
5	2013/05/15	1
6	AWF 3628 W	1
7	FRONT VIEW	1
8	17	1
9	4	1
10	TURNING	1
11	PART SECTION	1
12	(SCREW/EXTERNAL) THREAD	1
13	FILLET	1
14	4 mm	1
15	BLIND THREADED HOLE	2
16	INTERPENETRATION	2
17	100°	2
18	2 mm	2
19	A Ø10 B 60 C M16 D 8	4
20	*(See below.)*	4

TOTAL: 30

20



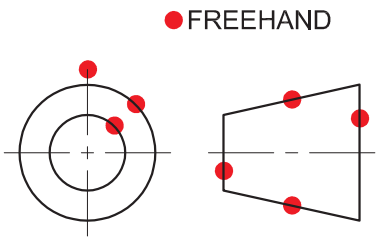
SYMBOL

PAPER 2 QUESTION 1
GRADE 12
November 2013
MEMORANDUM

ANSWERS		
1	2012-07-19	½
2	UFF335.dwg	½
3	INCREASE TOLERANCE	½
4	CAST IRON	½
5	± 0.3	½
6	6	½
7	MILLING	1
8	ROUGHNESS FACTOR	1
9	FILLET	1
10	Ø50	1
11	KEYWAY	1
12	CURVE OF INTERPENETRATION	1
13	TANGENT	1
14	30	1
15	2	1
16	262	1
17	LEFT VIEW	1
18	SECTIONAL FRONT VIEW	1
19	A. Ø76 B. Ø90 C. Ø30 D. 40 E. 10	5
20	Ø25.25	2
21	13.5 (UPPER) & 12.85 (LOWER)	4
22		4

TOTAL: 30

ANSWER 22



SYMBOL

PAPER 2 QUESTION 1
GRADE 12
FEB. - MAR. 2013
MEMORANDUM

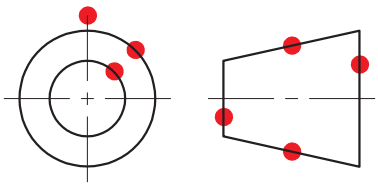
ANSWERS

1	J BURGER	½
2	mm	½
3	2012-07-18	½
4	S GOBA	½
5	CAD	½
6	382	½
7	4	1
8	0,03	1
9	GRINDING	1
10	105°/75°	1
11	44°	1
12	6	1
13	COUNTER-BORE	1
14	FRONT VIEW	1
15	R6	1
16	A. 19 ± 0,05 B. 22 C. Ø30 D. 60 E. 24	5
17	253	3
18	19,05	2
19	187,35 (UPPER) & 186,55 (LOWER)	4
20	*(See below.)*	4

TOTAL: 30

20

● FREEHAND



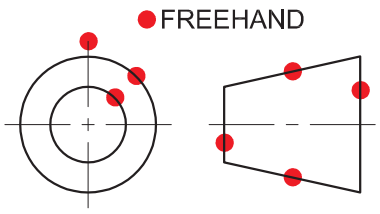
SYMBOL

PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2012
MEMORANDUM

ANSWERS

1	6	1
	7	1
	4	1
	8	1
	1	1
	5	1
	3	1
2	2011/06/01	1
3	www.weldtech.co.za	1
4	CHROME PLATED	1
5	PM 12 - PSC - 347	1
6	5 mm	1
7	26	1
8	SECTIONAL TOP VIEW	1
9	LEFT VIEW	1
10	M10	1
11	A - Ø20 B - 80 C - 22°	3
12	2000	1
13	16	2
14	'S' BREAK	1
15	TOTAL LENGTH OF FEATURE (LIMITED SPACE)	1
16	29.5 & 30.5	2
17		4
	TOTAL	30

ANSWER 17



SYMBOL

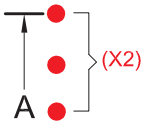
PAPER 2 QUESTION 1
GRADE 12
Feb.-Mar. 2012
MEMORANDUM

ANSWERS

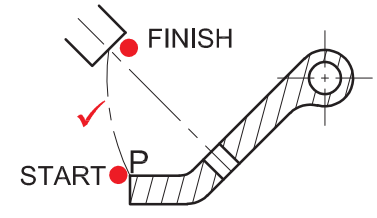
1	24/07/2011	½
2	A. MOKOENA	½
3	SCALE 1:2	½
4	N. BOOTH	½
5	3	½
6	REMOVE WASHER	½
7	4	1
8	0.8	1
9	THREAD/SCREW THREAD	1
10	THREADED PIN	1
11	CIRCLE	1
12	FULL SECTION	1
13	M 73	1
14	8	1
15	RIGHT VIEW	1
16	A. AF97 B.79 C.16 D.30 E.Ø50	5
17		3
18		2
19		4
20		4

TOTAL: 30

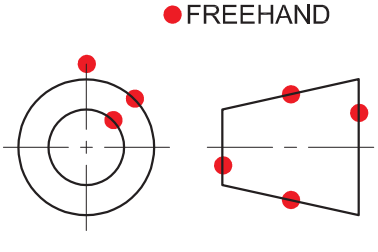
ANSWER 17



ANSWER 18

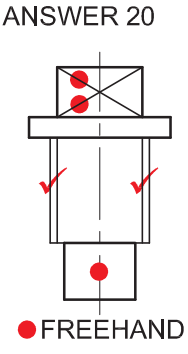


ANSWER 19



SYMBOL

ANSWER 20



PAPER 2 QUESTION 1
GRADE 12
NOVEMBER
MEMORANDUM

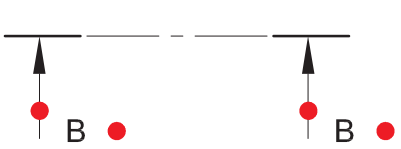
KRAM

ANTWOORDE

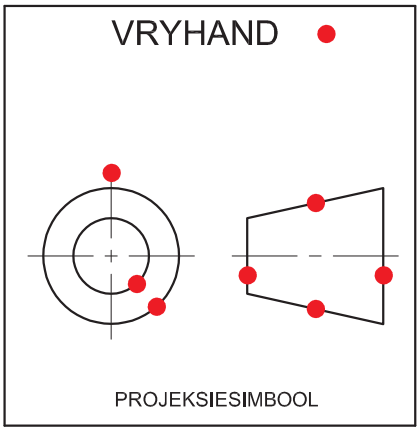
1	05 - 11 - 2010	1
2	SLINGER_003	1
3	GOVAN MBEKIRYLAAN	1
4	STEVEN	1
5	SKAAL 1 : 2	1
6	± 0,15	1
7	VERWYDERDE SNIT	1
8	DEURSNEEVOORAANSIG	1
9	SES	1
10	10 mm	1
11	**C**: 198 **D**: 76	2
12	R 3	1
13	TEENBORING	1
14	SPYGLEUF	1
15	OM DIE HANDVATSEL AAN DIE SPIL TE BEVESTIG	1
16	OM DIE KROONMOER AAN DIE SPIL TE BEVESTIG **OF** OM TE VERHOED DAT DIE KROONMOER LOSDRAAI	1
17	GEDEELTELIKE SNIT	1
18	SODAT DIE HANDVATSEL EN SPIL SAAM SAL DRAAI	1
19		2
20		4

TOTAAL: 25

ANTWOORD 19



ANTWOORD 20



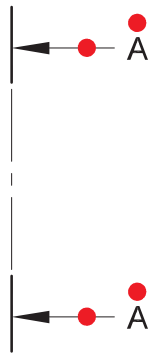
VRAESTEL 2 VRAAG 1
GRAAD 12
FEBRUARIE/MAART 2011
MEMORANDUM

ANSWERS

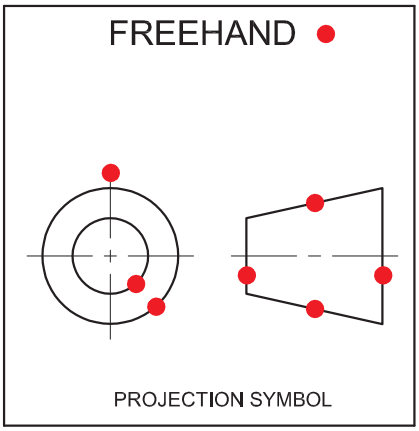
1	26/04/2010	1
2	BRASS	1
3	CAD	1
4	ONE	1
5	FOUR	1
6	± 0,25	1
7	16	1
8	THE END IS SQUARE	1
9	FILLET	1
10	40°	1
11	CHAMFER	1
12	Ø6	1
13	R3	1
14	HALF-SECTION	1
15	P: 48 Q: Ø88	2
16	PITCH-CIRCLE DIAMETER	1
17	SIX	1
18		2
19		4
20		6

TOTAL: 30

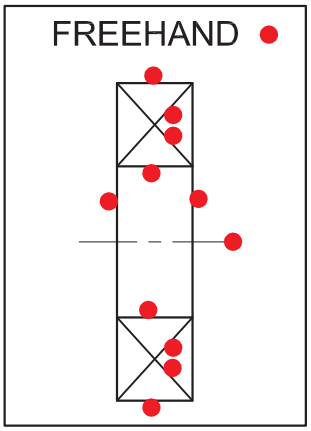
ANSWER 18



ANSWER 19



ANSWER 20

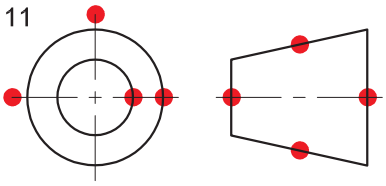


PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2010
MEMORANDUM

ANSWERS		
1	ADAPTOR PLATE	1
2	25-05-09	1
3	PP STEYN	1
4	Q1/DOE/10	1
5	10	1
6	9	1
7	GRINDING	1
8	DETAILED DRAWING	1
9	TOP VIEW	1
10	11	1
11	B 52 C 60 D Ø22 E M8	4
12	64	1
13	WELDING	1
14	WELD ALL AROUND	1
15	REVOLVED SECTION	1
16	0,3	1
17	0,2	2
18		4
19		5

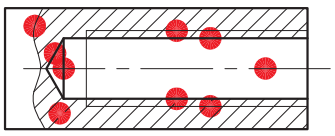
TOTAL: 30

11



SYMBOL

20



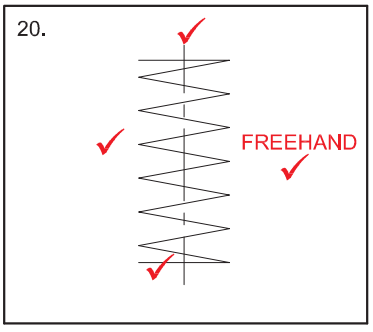
FREEHAND

PAPER 2 QUESTION 1
GRADE 12
FEBRUARY/MARCH 2010
MEMORANDUM

ANSWERS		
1	12/05/2009	1
2	CARLA	1
3	DIAPHRAGM REGULATOR	1
4	1:2	1
5	BRASS	1
6	5	1
7	10	1
8	3rd ANGLE ORTHOGRAPHIC PROJECTION	1
9	RIGHT VIEW	1
10	TOP VIEW	1
11	Ø60	1
12	Ø10	1
13	A: Ø14 B: Ø30 C: Ø64 D:Ø20 E: M12 F: 107	6
14	CUTTING PLANE	1
15	DIMENSION	1
16	PART SECTION	1
17	NO MACHINING	2
18		4
19	0,25	1
20	34,25	2

TOTAL: 30

20.

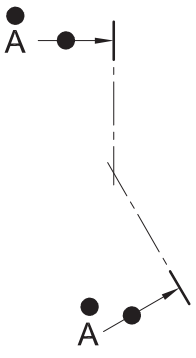


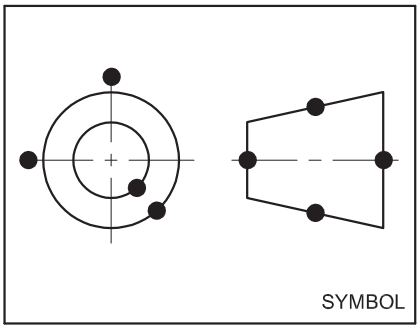
PAPER 2 QUESTION 1
GRADE 12 NOVEMBER 2009
MEMORANDUM

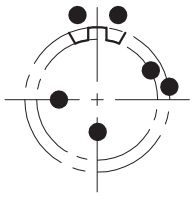
ANSWERS

1	20-02-08	1
2	CAST IRON	1
3	S8/ED/01	1
4	1	1
5	GOODWOOD	1
6	± 0,25	1
7	6	1
8	FILLET	1
9	SPLINE	1
10	RIB/WEB	1
11	THREADED HOLE	1
12	CENTRE LINE	1
13	WELDING SYMBOL	1
14	ALLIGNED SECTION	2
15	P 96, Q 56, R 30	3
16	150°	1
17	THIRD-ANGLE ORTHOGRAPHIC	1
18		2
19		4
20		3

TOTAL 29

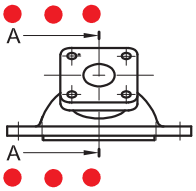




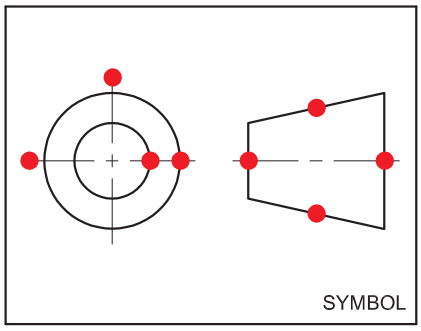


PAPER 2 QUESTION 1
GRADE 12
FEBRUARY/MARCH 2009
MEMORANDUM

ANSWERS		
1	2-10-08	½
2	EAST LONDON	½
3	N-P2-E018	½
4	2	½
5	±0,05	½
6	8	½
7	6	1
8	SCREW THREAD	1
9	CHAMFER	1
10	KNURLING	1
11	SPRING	1
12	6	1
13	AUXILIARY VIEW	1
14	1. FULL SECTION 4. HALF SECTION	2
15	Ø42, Ø213/213PCD, 12, M33	4
16	90°	1
17	A X2	3
18	MACHINED TO A ROUGHNESS VALUE OF 0,02	1
19	3RD ANGLE	1
20		4



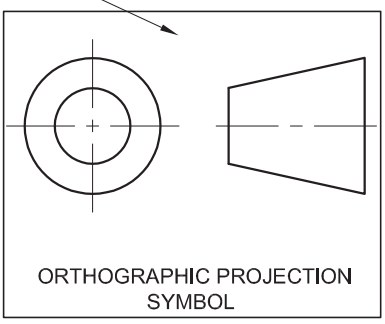
TOTAL 26



QUESTION 1 PAPER 2
GRADE 12 NOVEMBER 2008
MEMORANDUM

ANSWERS		
1	11/04/07	½
2	S-BU	½
3	TSIMBI CORPORATION	½
4	TC/DOE/0811	½
5	MILLIMETERS mm	½
6	2 DECIMAL PLACES 0,05 - 3 DECIMAL PLACES 0,005	1
7	NORMALISE	1
8	4	1
9	18mm	1
10	KEYWAY	1
11	SPOT FACE	1
12	M12	1
13	Ø36	½
14	A Ø180 B Ø36 C 68 D 33	4
15	E Ø27 F Ø12 G 24 H 5	4
16	REMOVED SECTION	1
17	PITCH CIRCLE DIAMETER	1
18	MACHINED TO A ROUGHNESS FINISH OF 0,05	1
19	SECTION A-A SECTION B-B	2
20		2

TOTAL 25



ORTHOGRAPHIC PROJECTION SYMBOL

2008 GRADE 12
PAPER 2
EXEMPLAR
QUESTION1
MEMORANDUM