

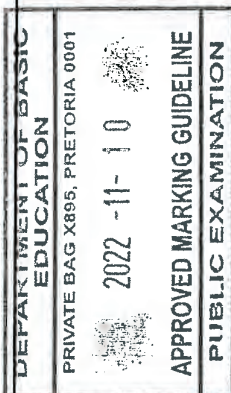
SA-STUDENT

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If it's your job to eat a frog, it's best to do it first thing in the morning. And If it's your job to eat two frogs, it's best to eat the biggest one first.

Mark Twain



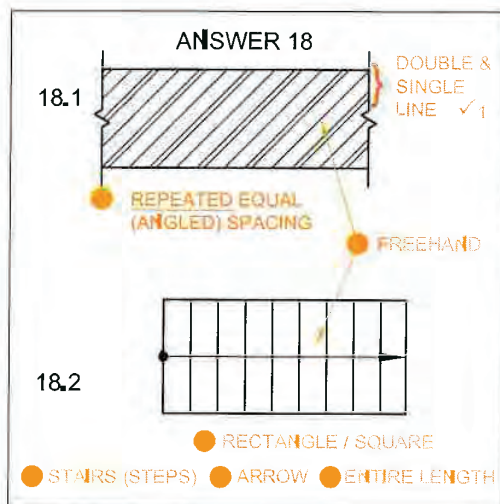


ANSWERS		
1	PROJECT NUMBER	1
2	MR N KEENAN	1
3	SITE PLAN	1
4	PRINTING	1
5	LISA B	1
6	15000	1
7	ARCHITECT and CLIENT / MR N KEENAN	2
8	2	1
9	RAINWATER DOWN-PIPE	1
10	E	1
11	4,57	1
12	NEW ✓ IRON / STEEL ✓	2
13	NORTH POINT	1
14	SWING / OPENING OF THE GATES	1
15	WATT METER / ELECTRICAL METER	1
16	FALL / GRADIENT / SLOPE / DROP	1
17	SOUTH WEST / SW	2
18	See below	4
19		3
20		3
	TOTAL	30

AB

B

my



ANSWER 19
Show ALL calculations.
APPLYING CORRECT FORMULA ✓
 $P = AB + BC + CD + DE$

$$\begin{aligned}
 &= AB + BC + CD + DE (- \text{GATE}) \\
 &= (24,23 + 8,37 + 18,38 + 31,2) - 3,6 \\
 &= 78,58 \quad \checkmark \quad \text{ANSWER IN METRES} \quad \checkmark
 \end{aligned}$$

ANSWER 20
Show ALL calculations.
APPLYING CORRECT FORMULA ✓
 $A = L \times B$

$$\begin{aligned}
 &= (10,8 \times 6) + (13,2 \times 6) + (6,7 \times 6,7) \\
 &= 64,8 + 79,2 + 44,89 \\
 &= 188,89 \quad \checkmark \quad \text{m}^2
 \end{aligned}$$

ANSWER IN SQUARE METRES AND m^2 SHOWN ✓

PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2022
MARKING GUIDELINES

ANSWERS

1	884939	1
2	1 : 1300	1
3	PROJECT NUMBER	1
4	MULLER ARCHITECTS	1
5	DIRECTION OF OPENING	1
6	RODDING EYE	1
7	2000	1
8	BUILDING LINE	1
9	SEWERAGE LINE	1
10	MUST BE DEMOLISHED/REMOVED	1
11	BRICK PAVING	1
12	ELECTRICITY METER / WATT METER	1
13	PARKING FOR DISABLED PEOPLE	1
14	18,28	2
15	YELLOW	1
16	18	2
17	SOUTH EAST	2
18	See below	3
19		3
20		4
TOTAL		30

ANSWER 18

Show ALL calculations.

APPLYING CORRECT FORMULA ✓

$$\begin{aligned}
 P &= AB + BC + CD + DE + EF + FG + GA \\
 &= 117.7 + 13.7 + 115.1 + 8.3 + 88.3 + 39.7 + 102.8 \\
 &= 485.6 \text{ m}
 \end{aligned}$$

ANSWER IN METRES ✓

ANSWER 19

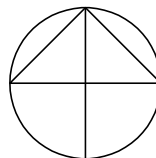
Show ALL calculations.

APPLYING CORRECT FORMULA ✓

$$\begin{aligned}
 A &= (15,4 \times 24,5) + (39,1 \times 48,0) \\
 &\quad + (6,0 \times 27,9) \\
 &= 377,3 + 1876,8 + 167,4 \\
 &= 2421,5 \text{ m}^2
 \end{aligned}$$

ANSWER 20

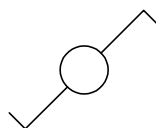
20.1



20.1 NORTH POINT

CIRCLE 0.5
VERTICAL LINE 0.5
HORIZONTAL LINE 0.5
ANGLED LINES 0.5

20.2



20.2 TWO-WAY SWITCH

CIRCLE 0.5
SWITCH ON ONE SIDE 0.5
SWITCH ON OTHER SIDE 0.5

20.1 + 20.2 IN FREEHAND 0.5

ANSWERS		
1	JBV-500W	1
2	JOHN	1
3	2021-01-23	1
4	DUPLEX PRINTING	1
5	Ø 100	1
6	INSPECTION CHAMBER	1
7	DECIDUOUS	1
8	CONCRETE WALL	1
9	GATE OPENING	1
10	ADJACENT BUILDING/STRUCTURE/HOUSE	1
11	6	1
12	BROWN	1
13	CROSSES BUILDING LINE	2
14	1 : 40	1
15	13,2	2
16	B/TOP RIGHT/349,2	1
17	SOUTH EAST/SE	2
18	See the title panel	3
19		3
20		4
TOTAL		30

ANSWER 18

APPLYING CORRECT FORMULA ✓

$$\text{Perimeter} = AB + BC + CE + EG + FG + FA$$

$$= 38,16 + 60 + 3,6 + 33,8 + 34,56 + 26,2$$

$$= 196,32 \quad \text{CONVERTED TO METER} \quad \checkmark$$

ANSWER 19

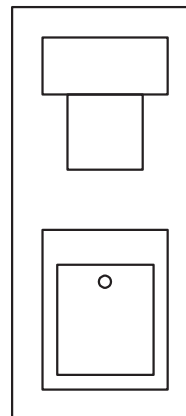
APPLYING CORRECT FORMULA ✓

$$\text{Area} = L \times B$$

$$= (15,9 \times 5,0) + (3,3 \times 5,4) + (8 \times 4,1)$$

$$= 130,12 \text{ m}^2 \quad \checkmark \quad \checkmark$$

ANSWER 20



FREEHAND 0.5

 RECTANGLE (T) 1
 SQUARE/
 RECTANGLE (B) 1

 RECTANGLE (B) 0.5
 RECTANGLE (S) 0.5
 HOLE 0.5

 PAPER 1 QUESTION 1
 GRADE 12
 NOVEMBER 2021
 MARKING GUIDELINE

ANSWERS

1	DRAW/PREPARE SITE PLAN	1
2	INK-ON (PTY) LTD	1
3	2020-11-18	1
4	1 : 300	1
5	www.druloffarch.co.za	1
6	6000	1
7	STAPLE STREET	1
8	5	1
9	METRES (m) and MILLIMETRES (mm)	2
10	DASH LINE/HIDDEN DETAIL	1
11	INCLINE/UP	1
12	EARTH/LIGHTNING CONDUCTOR	1
13	STORMWATER DRAIN	1
14	MH	1
15	BLUE	1
16	SOUTH EAST	2
17	3 or 3 : 48	2
18	See below	3
19		4
20		3
TOTAL		30

ANSWER 18

Show ALL calculations.

APPLYING CORRECT FORMULE ✓

$$\begin{aligned}
 &= 24,77 + 48 + 20,77 \\
 &+ 5,65 + 44 \\
 &= 143,19 \quad \checkmark \quad \text{m} \quad \checkmark
 \end{aligned}$$

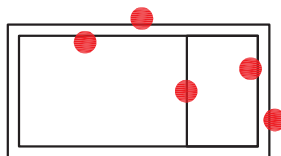
ANSWER 19

Show ALL calculations.

APPLYING CORRECT FORMULE ✓✓

$$\begin{aligned}
 &= (6 \times 6) + (10,5 \times 12) + (8,75 \times 4,5) + \\
 &(6 \times 6) \\
 &= 237,38 \quad \checkmark \text{m}^2 \quad \checkmark
 \end{aligned}$$

ANSWER 20



● FREEHAND

PAPER 1 QUESTION 1
GRADE 12
2021
MARKING GUIDELINES

ANSWERS		
1	422-2019	1
2	(MR) A BOBANI	1
3	2019-09-21	1
4	2	1
5	2	1
6	10810	1
7	INSPECTION CHAMBER	1
8	1,8	1
9	RE	1
10	RED	1
11	BUILDING LINE / BL	1
12	EARTH / LIGHTNING CONDUCTOR	1
13	DRAIN FIELD	1
14	1 : 30	1
15	NORTH WEST	2
16	4	2
17	14,89	2
18	See the title panel	3
19		3
20		4
TOTAL		30

ANSWER 18

$$\begin{aligned}
 \text{Perimeter} &= (59,50 + 23,45 + 61,15 + 37,5) - 3,5 \\
 &= 178,1 \text{ m}
 \end{aligned}$$

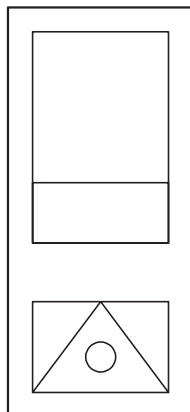
✓ = FORMULA

ANSWER 19

$$\begin{aligned}
 \text{Area} &= (10 \times 6) + (5,55 \times 8,14) + (2,5 \times 3,75) \\
 &= 114,55 \text{ m}^2
 \end{aligned}$$

✓ = FORMULA

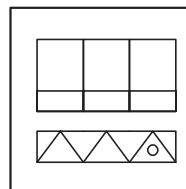
ANSWER 20



RECTANGLE 1
LINE 0.5
FREEHAND 0.5

RECTANGLE 1
TRIANGLE 0.5
HOLE 0.5

SANS 10143



PAPER 1 QUESTION 1
GRADE 12
SC/NSC 2020
MARKING GUIDELINE

ANSWERS

1	CLARK	1
2	1818	1
3	KRYPTON PTY (LTD)	1
4	2018/12/20	1
5	VERIFY ALL DIMENSIONS AND LEVELS	1
6	GRAVEL	1
7	6 m	1
8	2044	1
9	BROWN	1
10	BUILD-IN CUPBOARD	1
11	TO BE REMOVED	1
12	NORTH	1
13	IE	1
14	SHRUBBERY	1
15	SEPTIC TANK and FRENCH DRAIN	2
16	SOUTH WEST	1
17	CLUBHOUSE, DECK, POOL	3
18	See below	3
19		3
20		4
TOTAL		30

ANSWER 18

$$\begin{aligned}
 &AB + BC + CD + DE + EF + FG + GA \\
 &= 16.06 + 7.05 + 23.36 + 26.41 + \\
 &\quad 18.07 + 53.16 + 47.69 \\
 &= 191.80 \text{ m}
 \end{aligned}$$

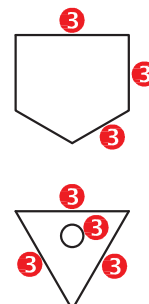
ANSWER 19

$$\begin{aligned}
 \text{AREA} &= (5 \times 6) + (7 \times 4) \\
 &= 30 + 28 \\
 &= 58\text{m}^2 \\
 &= 5.3 \times 5.95 \\
 &= 31.54\text{m}^2 \\
 &= 3 \times 5 \\
 &= 15\text{m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{AREA} &= 58 + 31.54 + 15 \\
 &= 104.54\text{m}^2
 \end{aligned}$$

ANSWER 20

FREEHAND



PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2019
MARKING GUIDELINES

ANSWERS		
1	VANESSA	1
2	108	1
3	YG/-2018	1
4	6 m	1
5	1,2 m	1
6	3	1
7	4	1
8	2500	1
9	RED	1
10	INSPECTION CHAMBER	1
11	RIVER	1
12	CONCRETE WALL	1
13	GULLY	1
14	CONTOUR HEIGHT/HEIGHT ABOVE SEA LEVEL	1
15	WATT/ELECTRICAL METER	1
16	12 m	1
17	SOUTH-WEST	2
18	68 m (formula 1, answer 1, decimal correct 1)	3
19	700 m ² (formula 1, answer 1, metre ² 1)	3
20	See below	6
TOTAL		30

ANSWER 18
Show ALL calculations.

$$\begin{aligned}
 &L+L+L+L+L+L \quad \checkmark \\
 &=9+21+4+4+5+25 \\
 &= 68 \text{ m} \quad \checkmark \checkmark
 \end{aligned}$$

ANSWER 19
Show ALL calculations.

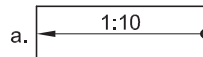
$$\begin{aligned}
 &(L \times B) + \frac{1}{2}(B \times H) \quad \checkmark \\
 &= (20 \times 30) + \frac{1}{2}(20 \times 10) \\
 &= 600 + 100 \\
 &= 700 \text{ m}^2 \quad \checkmark \checkmark
 \end{aligned}$$

ANSWER 20

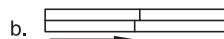
ANSWER 20
MARK ALLOCATION

FREEHAND

FREEHAND $\frac{1}{2}$



1. RAMP
- DOT $\frac{1}{2}$
- ARROW $\frac{1}{2}$
- GRADIENT (1 : 10) $\frac{1}{2}$
- DIRECTION 1



2. SLIDING DOOR
- RECTANGLE 1
- MIDDLE LINE $\frac{1}{2}$
- 2 OFFSET LINES 1
- ARROW $\frac{1}{2}$
TOTAL 6

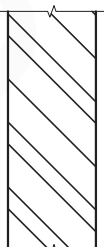
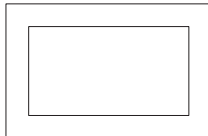
APPROVED

PAPER 1 QUESTION 1
GRADE 12
SC/NSC 2019
MARKING GUIDELINES

ANSWERS

1	SITE PLAN	1
2	2018 - 04 - 05	1
3	1 : 500	1
4	FEROX STREET	1
5	3	1
6	8	1
7	RODDING EYE	1
8	2200	1
9	GATE SWING	1
10	ELECTRICAL METER/WATT METER	1
11	3	1
12	PALISADE	1
13	WALL/STRUCTURE/BUILDING	1
14	3290	2
15	MUST BE REMOVED	1
16	DIRECTION OF FLOW	1
17	1 : 40	1
18	GREEN	1
19	<i>See the title panel</i>	4
20	226,18 m (calculation 2, answer 1, metre 1)	4
21	315.05 m ² (calculation 1, answer 1, metre ² 1)	3
TOTAL		30

ANSWER 19 FREEHAND $\frac{1}{2}$

<p>a)</p>  <p>FACE BRICK hatching MARK ALLOCATION</p> <table> <tr> <td>- DOUBLE LINE</td> <td>$\frac{1}{2}$</td> </tr> <tr> <td>- SINGLE LINE</td> <td>$\frac{1}{2}$</td> </tr> <tr> <td>- SPACING</td> <td>$\frac{1}{2}$</td> </tr> <tr> <td>TOTAL</td> <td>$1\frac{1}{2}$</td> </tr> </table>	- DOUBLE LINE	$\frac{1}{2}$	- SINGLE LINE	$\frac{1}{2}$	- SPACING	$\frac{1}{2}$	TOTAL	$1\frac{1}{2}$	<p>b)</p>  <p>GULLY MARK ALLOCATION</p> <table> <tr> <td>- LARGE RECTANGLE</td> <td>1</td> </tr> <tr> <td>- SMALL RECTANGLE</td> <td>1</td> </tr> <tr> <td>TOTAL</td> <td>2</td> </tr> </table>	- LARGE RECTANGLE	1	- SMALL RECTANGLE	1	TOTAL	2
- DOUBLE LINE	$\frac{1}{2}$														
- SINGLE LINE	$\frac{1}{2}$														
- SPACING	$\frac{1}{2}$														
TOTAL	$1\frac{1}{2}$														
- LARGE RECTANGLE	1														
- SMALL RECTANGLE	1														
TOTAL	2														

ANSWER 20

$$\begin{aligned}
 \text{Perimeter} &= (22,5 + 9,85 + 26,69 + 65,05 + 49,19 + 74,9) - (12 + 10) \\
 &= 248,18 \text{ m} - 22 \text{ m} \\
 &= 226,18 \text{ m}
 \end{aligned}$$

ANSWER 21

$$\begin{aligned}
 \text{Area} &= (7200 \times 24100) + (11100 \times 7200) + \frac{1}{2}(11100 \times 11100) \\
 &= 173,52 + 79,92 + 61.605 \\
 &= 315,045 \text{ m}^2
 \end{aligned}$$

PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2018
MARKING GUIDELINE

ANSWERS		
1	1 : 1000	1
2	PREPARING THE SITE PLAN/DRAWING THE SITE PLAN	1
3	SUB 8 OF LOT 204	1
4	ONE	1
5	INSPECTION CHAMBER	1
6	15	1
7	2,3 m HIGH STEEL PALISADE FENCE	1
8	COBBLE STONES	1
9	SEPTIC TANK	1
10	SCHOOL STREET	1
11	BUILDING LINE	1
12	EDGE / BOUNDARY OF THE SPORTS FIELD	1
13	PAVEMENT	1
14	CORNER HEIGHT / HEIGHT ABOVE SEA LEVEL	1
15	EAST	2
16	105,651 m	2
17	NOT WITHIN THE BUILDING LINE	2
18	140 m (calculation 1, answer 1, metre 1)	3
19	872,5 m ² (calculation 1, answer 1, metre ² 1)	3
20	See below	4
TOTAL		30

ANSWER 18: Show ALL calculations.

$$\begin{aligned}\text{Perimeter} &= 40+6+5+13+5+6+35+12,5+5+12,5 \\ &= 140\text{ m}\end{aligned}$$

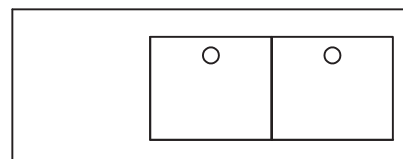
ANSWER 19: Show ALL calculations.

$$\begin{aligned}\text{AREA OF RECTANGLE} &= 40 \times 25 \\ &= 1000\text{ m}^2\end{aligned}$$

$$\begin{aligned}\text{AREA 1 + AREA 2} &= (13 \times 5) + (12,5 \times 5) \\ &= 65 + 62,5 \\ &= 127,5\text{ m}^2\end{aligned}$$

$$\begin{aligned}\text{TOTAL AREA OF THE SPORT CENTRE} &= 1000 - 127,5 \\ &= 872,5\text{ m}^2\end{aligned}$$

ANSWER 20

**DOUBLE SINK MARK ALLOCATION**

- LARGE RECTANGLE 1
- SMALL RECTANGLE 1
- DIVIDING LINE 1
- TWO DRAINAGE HOLES 1
- FREEHAND 1

PAPER 1 QUESTION 1
GRADE 12
SCE 2018
MARKING GUIDELINES

	ANSWERS	
1	LUKE	1
2	STAND 7392	1
3	8789	1
4	30 m	1
5	1,2 m	1
6	2	1
7	INSPECTION EYE	1
8	8	1
9	50 m	1
10	140 l³ / CUBIC LITRE	2
11	ORANGE RIVER	1
12	SECURITY FENCE	1
13	(50 YEAR) FLOOD LINE	1
14	NORTH POINT	1
15	BROWN	1
16	SOUTH EAST	2
17	6,2 m	2
18	735,23 m (calculation 1, answer 1, metre 1)	3
19	1991,25 m² (calculation 1, answer 1, metre² 1)	3
20	See below	4

TOTAL: 30

ANSWER 18

Show ALL calculations.

$$\begin{aligned}
 &L+L+L+L \\
 &=143,560+223,910+143,890+223,870 \\
 &= 735.23 \text{ m}
 \end{aligned}$$

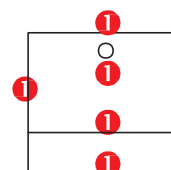
ANSWER 19

Show ALL calculations.

$$\begin{aligned}
 &(L \times B) + (L \times B) + (L \times B) \\
 &= (19,5 \times 28,5) + (21 \times 24) + (27 \times 34,5) \\
 &= 1991,25 \text{ m}^2
 \end{aligned}$$

20

FREEHAND ①



PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2017
MARKING GUIDELINES

	ANSWERS	
1	SITE PLAN	1
2	YURI ARCHITECTS	1
3	VGY/-2017	1
4	6 m	1
5	ASPHALT	1
6	4	1
7	NATURAL FEATURES	1
8	47 m	1
9	1 : 20	1
10	PLACE OF WORSHIP	1
11	100 YEAR FLOOD LINE	1
12	HEIGHT ABOVE SEA LEVEL	2
13	2000 mm	1
14	BUILDING TO BE REMOVED	1
15	SEPTIC TANK	1
16	WEST ELEVATION	2
17	106 m	2
18	112 m (calculation 1, answer 1, metre 1)	3
19	14725 m ² (calculation 1, answer 1, metre ² 1)	3
20		4

TOTAL: 30

ANSWER 18

Show ALL calculations.

$$\begin{aligned}
 P &= 16+20+4+16+12+20+8+16 \\
 &= 112 \text{ m}
 \end{aligned}$$

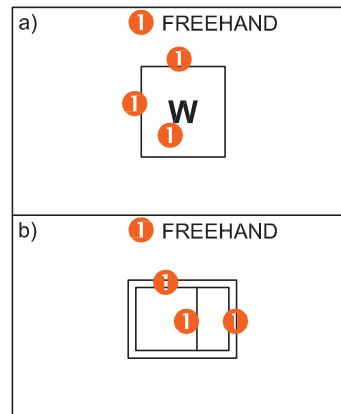
ANSWER 19

Show ALL calculations.

$$\begin{aligned}
 \text{AREA OF RECTANGLE} &= 100 \times 134,500 \\
 &= 13450 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{AREA OF TRIANGLE} &= \frac{1}{2} 100 \times (25) \\
 &= 1275 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{TOTAL AREA OF SITE} &= 13450 + 1275 \\
 &= 14725 \text{ m}^2
 \end{aligned}$$

ANSWER 20

PAPER 1 QUESTION 1
 GRADE 12
 SSE 2017
 MARKING GUIDELINES

ANSWERS		
1	2015-10-12	1
2	J VAN WYK	1
3	NONE	1
4	50967	1
5	1 : 450	1
6	INSPECTION CHAMBER	1
7	RODDING EYE	1
8	MAN HOLE	1
9	5357	1
10	SLOPE OF SEWAGE LINE	1
11	ELECTRICAL METER/WATT METER/SUPPLY	1
12	RED	1
13	1 m	1
14	AGRICULTURAL LAND	1
15	EAST	2
16	30.4 m [calculation 1, answer 1, converted to metres 1]	3
17	1254.69 m ² [calculation 2, answer 1, converted to metres 1]	4
18	See below	3
19		4
TOTAL		30

ANSWER 16

Show ALL calculations

$$\begin{aligned}
 \text{PERIMETER} &= S + S + S + S + S + S \quad \checkmark_1 \\
 &= 8 + 4.8 + 5 + 2.4 + 3 + 7.2 \\
 &= 30.4 \text{ m} \quad \checkmark_1 \quad \checkmark_1
 \end{aligned}$$

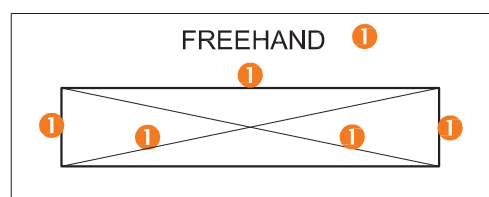
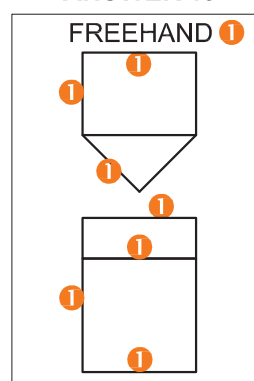
ANSWER 17

Show ALL calculations

$$\begin{aligned}
 \text{Area of } \Delta &= \frac{1}{2} b \times h \quad \checkmark_1 \\
 &= \frac{1}{2} (25.2) \times (44.4) \\
 &= 559.44 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Area of rectangle} &= l \times b \quad \checkmark_1 \\
 &= 25.2 \times 27.6 \\
 &= 695.52 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Area of Stand 1932} &= 559.44 + 695.52 \\
 &= 1254.96 \text{ m}^2 \quad \checkmark_1 \quad \checkmark_1
 \end{aligned}$$

ANSWER 18**ANSWER 19**

PAPER 1 QUESTION 1
GRADE 12
Feb.-Mar. 2017
MEMORANDUM

ANSWERS		
1	2	1
2	WILLIAM	1
3	1 : 800	1
4	VERNON	1
5	NAT PRINTERS	1
6	0 / NONE	1
7	2015-05-06	1
8	3	1
9	INSPECTION CHAMBER	1
10	BLACK	1
11	CONTOUR LINE	1
12	MILLIMETRE or mm	1
13	COMPACTED HARD CORE	1
14	ELECTRIC SECURITY FENCE	2
15	GATE OPENING DIRECTION	1
16	SERVITUDE	2
17	STOREROOM OVER BUILDING LINE	2
18	369,138 m [calculations 2, answer 1, metres 1]	3
19	2184 m ² [calculations 2, answer 1, metres ² 1]	4
20		3
TOTAL		30

ANSWER 18

Show ALL calculations.

$$\begin{aligned}
 L &= 2 (L + B) \\
 &= (2 \times 74569) + (2 \times 116000) \quad \checkmark 1 \\
 &= 149,138 + 232,000 \\
 &= 381,138
 \end{aligned}$$

$$\begin{aligned}
 &= 381,138 - \text{GATE} \\
 &= 381,138 - 12,000 \\
 &= 369,138 \text{ m} \quad \checkmark 1 \quad \checkmark 1
 \end{aligned}$$

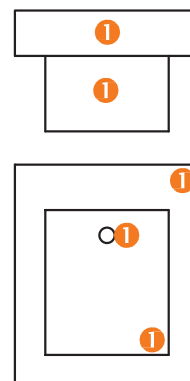
ANSWER 19

Show ALL calculations.

$$\begin{aligned}
 B A &= 9[(12,4 \times 20) - (4 \times 4)] + (12 \times 8) \quad \checkmark 1 \quad \checkmark 1 \\
 &= 9(248 - 16) + 96 \\
 &= 2088 + 96 \\
 &= 2184 \text{ m}^2 \quad \checkmark 1 \quad \checkmark 1
 \end{aligned}$$

ANSWER 20

FREEHAND ①



PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2016
MEMORANDUM

	ANSWERS	
1	2	1
2	031 5836092	1
3	REPLACE FUEL TANKS	1
4	5 500	1
5	IBR	1
6	4	1
7	3	1
8	DEMOLISH/REMOVE	1
9	RAMP	1
10	BLUE	1
11	NO COLOUR	1
12	GULLEY	1
13	ADJACENT BUILDING/STRUCTURE	1
14	EAST	2
15	SPEED UP DRAWING PROCESS/ STANDARDISATION OF PRESENTATION	2
16	SCALE	1
17	271,3 m	2
18	82,28 m [calculation 1, answer 1, converted to metres 1]	3
19	318,2179 m ² [calculation 1, answer 1, metres ² 1]	3
20	See below	4

TOTAL: 30

ANSWER 18

Show ALL calculations.

$$20,57 + 6,545 + 7,48 + 6,545 + 28,05 + 13,09 = 82,28 \text{ m}$$

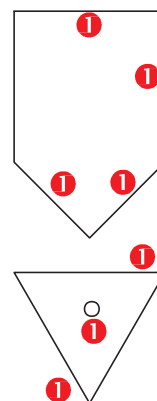
ANSWER 19

Show ALL calculations.

$$(20,57 \times 13,09) + (6,545 \times 7,48) \\ 269,2613 + 48,9566 \\ 318,2179 \text{ m}^2$$

20

FREEHAND ①



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

	ANSWERS	
1	AFSP-2015	1
2	2	1
3	1	1
4	MRS SCHUTTE	1
5	2015-02-13	1
6	2	1
7	INSPECTION CHAMBER	1
8	DIRECTION OF FLOW	1
9	TREE	1
10	RED	1
11	CONTOUR LINE	1
12	DEMOLISH/REMOVE	1
13	30,25 m	1
14	4 700 mm	1
15	3 m	2
16	SOUTH-WEST	2
17	ELECTRICAL SUBSTATION	2
18	72 m [calculation 1, answer 1, converted to metres 1]	3
19	248m ² [calculation 1, answer 1, metres ² 1]	3
20	See below	4

TOTAL 30

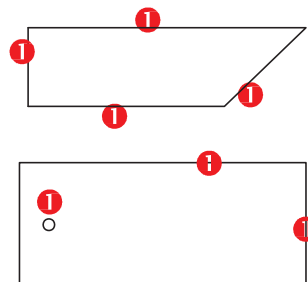
ANSWER 18
Show ALL calculations.

$$13 + 6 + 6 + 6 + 3 + 8 + 10 + 20 = 72 \text{ m}$$

ANSWER 19
Show ALL calculations.

$$\begin{array}{rcl}
 13 \times 6 & = & 78 \\
 6 \times 7 & = & 42 \\
 10 \times 8 & = & 80 \\
 8 \times 6 & = & 48 \\
 \hline
 & & 248 \text{ m}^2
 \end{array}$$

20

FREEHAND 1

PAPER 1 QUESTION 1
GRADE 12
November 2015
MEMORANDUM

	ANSWERS	
1	1VG2014	1
2	INCLUDE A SOAK PIT	1
3	1 : 300	1
4	2	1
5	BRICK PAVING	1
6	DWELLING	1
7	BLACK	1
8	GREEN	1
9	2000 / 2 m	1
10	WIRE FENCE	1
11	CORNER HEIGHT/HEIGHT ABOVE SEA LEVEL	1
12	BUILDING LINE	1
13	ELECTRICAL METER	1
14	NORTH POINT	1
15	NORTH-WEST	2
16	8,378	2
17	37,8	2
18	44 m [calculation 1, answer 1, converted to metres 1]	3
19	789,7 m ² [calculation 1, answer 1, metres ² 1]	3
20	(See below)	4

TOTAL: 30

ANSWER 18
Show ALL calculations.

$$15+3.5+3.1+8.8+3.5+3.1+3.5 = 44 \text{ m}$$

ANSWER 19
Show ALL calculations.

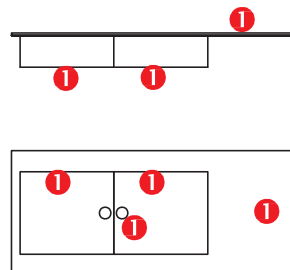
$$37,8 - (5+3) = 29,8$$

$$30 - (0,5+3) = 26,5$$

$$29,8 \times 26,5 = 789,7 \text{ m}^2$$

20

FREEHAND ①



	ANSWERS	
1	2014-08-05	1
2	VERIFY DIMENSIONS AND LEVELS	1
3	1 : 500	1
4	CHANGE ROAD	1
5	TAR	1
6	CONFERENCE CENTRE	1
7	YELLOW	1
8	BLUE	1
9	HEIGHT ABOVE SEA LEVEL/CORNER HEIGHT	1
10	MAN HOLE	1
11	BOUNDARY LINE	1
12	PAVEMENT	1
13	CONTROL POINT/GUARD HOUSE	1
14	COMPACTED HARD CORE	1
15	RIDGE ROAD	2
16	24	2
17	75,128	2
18	129,6 [calculation 1, answer 1, converted to metres 1]	3
19	865,67 m ² [calculation 1, answer 1, metres ² 1]	3
20	(See below)	4

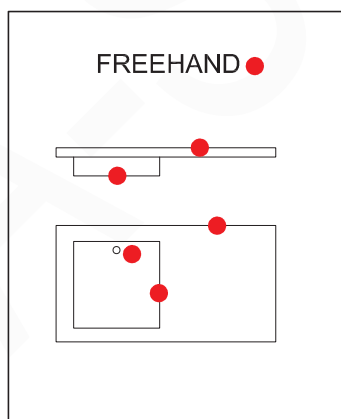
TOTAL: 30

<p>20</p> <p>FREEHAND ①</p>	<p>20</p> <p>FREEHAND ①</p> <p>ALTERNATIVE ANSWER</p>
------------------------------------	--

ANSWERS

1	01-10-2005	1
2	CHECKING THE DRAWING	1
3	3 M	1
4	Dr AL SATION	1
5	6	1
6	4	1
7	STAND 34	1
8	RED	1
9	BROWN	1
10	DIRECTION OF FLOW	1
11	BOUNDARY LINE	1
12	REMOVE / DEMOLISH	1
13	ADJACENT BUILDING	1
14	DEMOLISH	1
15	4 m	1
16	15,97 m	2
17	NORTH WEST ELEVATION	2
18	102,8 m [calculation 1, answer 2, metre 1]	4
19	354,51 m ² [calculation 1, answer 2, metre ² 1]	4
20	(See below.)	3

TOTAL: 30



ANSWERS

1	14-02-2014	1
2	P XABA	1
3	1 : 200	1
4	2014-001	1
5	BUDGET DRAUGHTING	1
6	4	1
7	1 : 30	1
8	2,25 m	1
9	GATE	1
10	GULLEY	1
11	UP	1
12	RETAINING WALL	1
13	TREE	1
14	SOUTH WESTERN	1
15	47,5 m	2
16	5 m x 12,5 m	2
17	156 m ² [calculation 1, answer 1, metre ² 1]	3
18	245 m [calculation 1, answer 1, metre 1]	3
19	12,4 m [calculation 1, answer 1, metre 1]	3
20	(See below.)	3

TOTAL: 30

20

FREEHAND ●



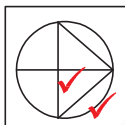
ANSWERS

1	2	1
2	2	1
3	114	1
4	3,5 m	1
5	MANHOLE	1
6	2,4 m	1
7	ADJACENT BUILDING/STRUCTURE	1
8	OUTBUILDING TO BE DEMOLISHED	1
9	DRIVEWAY	1
10	BOUNDARY LINE LENGTH	1
11	BUILDING LINE	1
12	7521	1
13	ES7245	1
14	AVOCADO	1
15	MILLIMETRES or mm	1
16	HIGHER	2
17	3,5 m	2
18	(See below.)	4
19	(See below.)	4
20	52 m [calculation 1, answer 1, metres 1]	3

TOTAL: 30

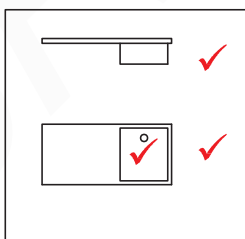
18

DIRECTION ✓
FREEHAND ✓



19

FREEHAND ✓

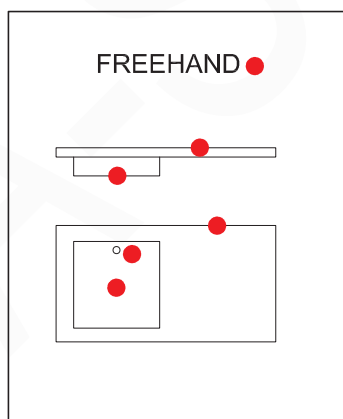


PAPER 1 QUESTION 1
GRADE 12
November 2013
MEMORANDUM

ANSWERS

1	12-12-201	1
2	THANDI	1
3	2	1
4	4 m / 4000	1
5	1 : 40	1
6	2,2 m or 2200	1
7	RED	1
8	2,75 m or 2750	1
9	SERVITUDE	1
10	GATE SWING	1
11	BUILDING LINE	1
12	DIMENSION	1
13	BOUNDARY LINE	1
14	WEST	2
15	C	2
16	3,48 m or 3480	2
17	THE TREE OVER THE SEWERAGE LINE	2
18	69,6 m [calculation 1, answer 1, metre 1]	3
19	167,04 m ² [calculation 1, answer 1, metre ² 1]	3
20		3

TOTAL: 30



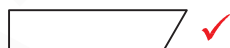
ANSWERS

1	DESIGN FOR LIVING ARCHITECTS	1
2	LEBO	1
3	18/10/2012	1
4	DBE-2012-01	1
5	VERIFY DIMENSIONS AND CHECK LEVELS	1
6	1,8 m or 1 800 mm	1
7	1	1
8	16	1
9	UP (STEP)	1
10	SEPTIC TANK	1
11	SEWERAGE PIPE/LINE	1
12	ASPHALT	1
13	GATE OPENING DIRECTION	2
14	(FUTURE) RECREATIONAL DEVELOPMENT	2
15	128,55 m	2
16	INSPECTION EYE	1
17	21 880 mm	2
18	437,853 m [calculation 1, answer 1, metre 1]	3
19	1 214 m ² [calculation 1, answer 1, metre ² 1]	3
20	(See below.)	3

TOTAL: 30

20

FREEHAND ✓



PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2012
MEMORANDUM

	ANSWERS		
1	FOUNDATION	6	10
	DAMP-PROOF COURSE	9	
	GROUND LEVEL	7	
	INTERNAL WALL	1	
	CONCRETE SLAB	3	
	COMPACTED HARDCORE	4	
	UNDISTURBED EARTH	5	
	SCREED	2	
	PLASTER	10	
	FINISHED FLOOR LEVEL	8	
2	Q1P1-SUP-2012		1
3	ZAPPY PRINTERS		1
4	5 m or 5000 mm		1
5	STRELITZIA ROAD		1
6	HEIGHT		1
7	INDIGENOUS TREES		1
8	ROAD/DRIVEWAY		1
9	SEPTIC TANK		1
10	PARKING		1
11	6		1
12	COBBLE STONES		1
13	469 m [calculation 1, answer 1, metres 1]		3
14			3
15	106 m ² [calculation 1, answer 1, metres ² 1]		3

TOTAL: 30

14

FREEHAND ✓

✓

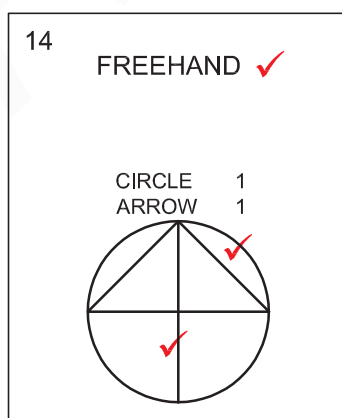
○ ✓

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

ANSWERS

1	7	1
	2	1
	10	1
	4	1
	9	1
	3	1
	1	1
	6	1
	8	1
	5	1
2	2/08	1
3	ROCKY ROAD	1
4	SEWER LINE	1
5	ROAD	1
6	UNIT/BUILDING/SUITE/CONSULTING ROOM 9	1
7	BRICK PAVING/WALKWAY	1
8	BUILDING LINE	1
9	4	1
10	10	1
11	A (1558,2)	2
12	456,6 m [calculation 1, answer 1, metres 1]	3
13	12916,8 m ² [calculation 1, answer 1, metres ² 1]	3
14		3

TOTAL: 30



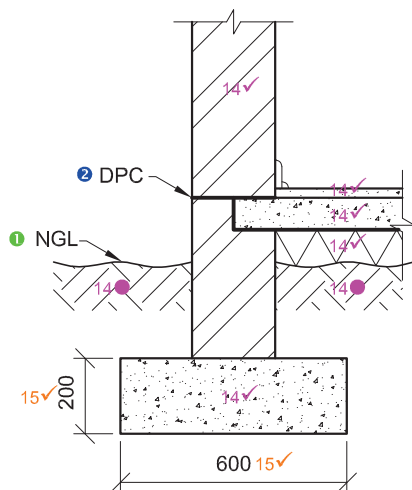
PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2011
MEMORANDUM

ANSWERS

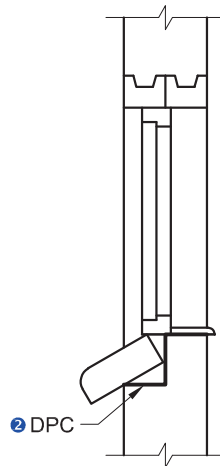
1	THE <u>OUTBUILDING IS OUTSIDE THE BUILDING LINE</u> OR THE <u>OUTBUILDING ROOF IS OVER THE BOUNDARY LINE.</u>	2
2	79	1
3	1	1
4	SCALE 1 : 200	1
5	12-04-2010	1
6	KAYSERS BEACH	1
7	MARLIN DRIVE	1
8	2	1
9	14	1
10	INSPECTION EYE	1
11	MANHOLE	1
12	BUILDING LINE	1
13	MUNICIPAL SEWER LINE	1
14	CONTOUR LINE	1
15	ROOF OVERHANG	1
16	BOUNDARY LINE	1
17	ISLAND IN THE ROAD	1
18	0.5 m	1
19	SOUTH	1
20	$37.806 + 24.200 + 10.615 + 30.300 + 31.706 \text{ ①} = 134.627 \text{ ✓m✓}$	$2\frac{1}{2}$
21	$37.806 \times 31.706 = 1198.67704 \text{ ①}$ $37.806 - 30.3 = 7.506 \text{ ①}$ $7.506 \times 7.506 = 56.340036 \text{ ①}$ $56.340036 / 2 = 28.170018 \text{ ①}$ $1198.67704 - 28.170018 \text{ ①} = 1170.5 \text{ ✓m}^2 \text{ ✓}$	$4\frac{1}{2}$

TOTAL: 27

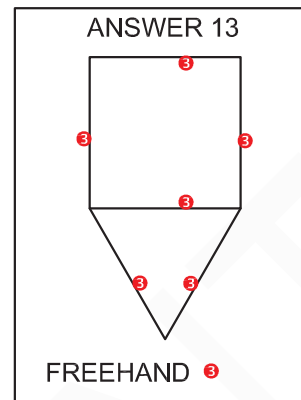
ANSWERS 1, 2, 14 & 15



ANSWER 2



ANSWER 13



ANSWERS

1		$\frac{1}{2}$
2		1
3	A. RAFTER	1
	B. GANG NAIL/TRUSS PLATE/NAIL PLATE	1
	C. TIE BEAM	1
	D. WALL PLATE	1
4	TILES	1
5	LINTEL/BEAM	1
6	TO CARRY/SUPPORT THE WEIGHT ABOVE THE WINDOW.	1
7	TO INDICATE THAT THE WALL IS CONTINUING	1
8	CAVITY WALL	1
9	FOR DISABLED PEOPLE	1
10	3	1
11	ND6/6 & ND9/12	2
12	$5.766 \times 5.036 = 29.0376 \text{ m}^2$ ① $2.124 \times 2.124 = 4.5114 \text{ m}^2$ ① $4.5114 / 2 = 2.2557 \text{ m}^2$ ① $29.0376 - 2.2557 = 26.7819 \text{ m}^2$ ✓	4
13		$\frac{1}{32}$
14		6
15		2

TOTAL: 30

PAPER 1 QUESTION 1
 GRADE 12
 NOVEMBER 2010
 MEMORANDUM

ANSWERS

1	GOVENDER & SONS	1
2	1:200	1
3	Q1P1-S-2010	1
4	CRAIG	1
5	0	1
6	ADJACENT BUILDING	1
7	CONTOUR	1
8	GATE SWING	1
9	BUILDING LINE	1
10	MUST BE DEMOLISHED	1
11	24 VALLEY VIEW ROAD	1
12	73	2
13	4500	2
14	1,7 m	2
15	GREEN	2
16	RED	1
17	368,29 m ²	3
18	33,9%	3
19		4

TOTAL: 30

19 ✓

✓✓

○

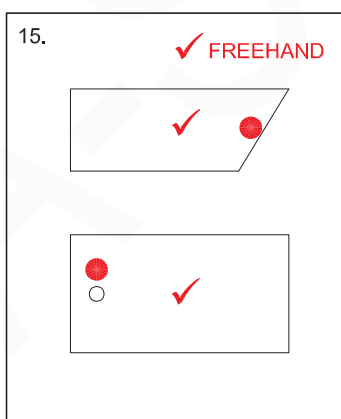
FREEHAND ✓

PAPER 1 QUESTION 1
GRADE 12
FEBRUARY/MARCH 2010
MEMORANDUM

ANSWERS

1	6	1
2	ISLAND IN KITCHEN	1
3	2009-351	1
4	P MSOMI	1
5	1:100	1
6	GUTTER	1
7	FFL/FINISHED FLOOR LEVEL	1
8	NGL/GL	1
9	BUILT-IN CUPBOARD	1
10	WC	1
11	NORTH POINT	1
12	FLOOR PLAN	1
13	SOUTH ELEVATION	1
14	C; B; A; F; H	5
15		4
16	18°	1
17	BLACK	1
18	41,2	3
19	82,64 m ²	3

TOTAL: 30



PAPER 1 QUESTION 1
GRADE 12 NOVEMBER 2009
MEMORANDUM

ANSWERS

1	2	1
2	ERF 9	1
3	1:250	1
4	19-02-2008	1
5	PAVING	1
6	6TH AVENUE	1
7	GREEN BELT	1
8	2500m	1
9	5	1
10	CORNER HEIGHT	1
11	BOUNDARY LINE	1
12	PROPOSED NEW OUT-BUILDING	1
13	SEWER LINE	1
14	MAN HOLE	1
15	NORTH POINT	1
16	2m	2
17	56,607	2
18	NORTHWESTERN ELEVATION	2
19	117, 607 m	3
20	889,875 m ²	3

TOTAL 27

ANSWERS		
1	SITE PLAN	½
2	99	½
3	1:200	½
4	25-09-2008	½
5	31,25 m	1
6	mm	1
7	EAST LONDON	1
8	5000	1
9	4	1
10	BUILDING LINE	1
11	TREE	1
12	SEWERAGE	1
13	EXISTING DWELLING	1
14	BOUNDARY LINE	1
15	CONTOUR LINE	1
16	3 m	2
17	BECAUSE OF THE PROTECTED TREE	2
18	NORTH EAST	2
19	120,83 m	3
20	886,72 m ²	3

TOTAL 25

ANSWERS

1	1:200	1
2	TSHEDZA STREET	1
3	58	1
4	OPEN LAND / NOTHING	2
5	RED	1
6	56	1
7	15	1
8	INSPECTION EYE	1
9	RODDING EYE	1
10	BUILDING LINE	1
11	CONTOUR LINE	1
12	MAN HOLE	1
13	SEWERAGE LINE (DRAIN LINE)	1
14	ENTRANCE	1
15	NORTH POINT	1
16	13 METRES	2
17	4 METRES	2
18	EAST	1
19	18 METRES / 18000mm	2
20	750m ²	2

TOTAL 25