



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE NASIONALE SENIOR SERTIFIKAAT

GRADE/GRAAD 12

MATHEMATICAL LITERACY P2 WISKUNDIGE GELETTERDHEID V2

MARKING GUIDELINES/NASIENRIGLYNE

MARKS/PUNTE: 150

SYMBOL	EXPLANATION/
M	Method/ <i>Metode</i>
MA	Method with accuracy/ <i>Metode met akkuraatheid</i>
CA	Consistent accuracy/ <i>Volgehoue akkuraatheid</i>
RCA	Rounding consistent accuracy/ <i>Volgehoue akkurate afronding</i>
A	Accuracy/ <i>Akkuraatheid</i>
C	Conversion/ <i>Herleiding</i>
S	Simplification/ <i>Vereenvoudiging</i>
RT/RG	Reading from a table/graph/diagram/ <i>Lees vanaf tabel/grafiek/diagram</i>
SF	Correct substitution in a formula/ <i>Korrekte vervanging in formule</i>
O	Opinion/Example/Definition/Explanation/Justification/Verification/ <i>Opinie/Verduideliking/Verifikasie</i>
P	Penalty, e.g. for no units, incorrect rounding off, etc./ <i>Penalisasie, bv. vir geen eenhede/verkeerde afronding, ens</i>
R	Rounding off/ <i>Afronding</i>
NPR	No penalty rounding or omitting units/ <i>Geen penalisasie vir afronding nie</i>
AO	Answer only, full marks/ <i>Slegs antwoord, volpunte</i>

These marking guidelines consist of 13 pages.
Hierdie nasienriglyne bestaan uit 13 bladsye

QUESTION/VRAAG 1 [28MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
1.1.1	✓✓A Tambo Memorial Hospital	2A Name of hospital (2)	MP L1
1.1.2	✓✓A S OR/OF C	2A Letter S or C (2)	MP L1
1.1.3	✓✓A Montagu Dr	2A name of the road (2)	MP L1
1.1.4	→ ✓✓A OR/OF ✓✓A Single arrow pointing in one direction. <i>Enkel pyltjie wat die rigting aandui.</i>	2A label 2A correct description with arrow (2)	MP L1
1.1.5	✓✓A Twenty-six minutes past three in the afternoon. <i>Ses en twintig minute oor drie in die middag.</i>	2A analogue time (2)	M L1
1.2.1	✓✓A 1 cm on the scale drawing is 5 000 cm in real life <i>1 cm op die skaaltekening is 5 000 cm in die werklikheid.</i> OR/OF 1 unit on the map/paper is equivalent to 5 000 units in real life/on the ground <i>1 eenheid op die kaart/papier is ekwivalent aan 5 000 eenhede in werklikheid/op die grond.</i>	2A explanation (2)	MP L1
1.2.2	All the side values must be added. ✓✓A <i>Al die sylengtes moet bymekaargetel word.</i>	2A explanation (2)	M L1
1.2.3	✓A ✓A 200 : 400 = 1 : 2 ✓CA	1A north side value 1A west side value 1CA simplification (3)	M L1
1.3.1	✓C ✓A $2,44 \times 1\,000 = 2\,440$ mm	1C multiply by 1 000 1A length (2)	M L1
1.3.2	Radius = $\frac{2,44\text{m}}{2}$ ✓M ✓A ✓A = 1,22 m OR/OF 1 220 mm	1M dividing by 2 1A length 1A unit (3)	M L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
1.3.3 (a)	D ✓✓A	2A correct formula (2)	M L1
1.3.3 (b)	F ✓✓A	2A correct formula (2)	M L1
1.3.3 (c)	A ✓✓A	2A correct formula (2)	M L1
		[28]	

QUESTION/VRAAG 2 [29 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
2.1.1	Clockwise/Kloksgewys ✓✓A	2A direction (2)	MP L1
2.1.2	Right-hand side/Regterkant ✓✓A	2A side (2)	MP L2
2.1.3	<p>Exit Store Z and turn right using the walkway passing two stores on your left then turn left. ✓A</p> <p>Pass Store V and Restaurant D and turn right immediately, continue until you see Restaurant A on your left. ✓A</p> <p><i>Verlaat Winkel Z en draai regs in die wandelgang, gaan verby 2 winkels aan jou linkerkant en draai links. Gaan verby winkel V en restaurant D en draai regs. Gaan voort totdat jy Restaurant A aan jou linkerkant sal vind.</i></p> <p>OR/OF</p> <p>Exit Store Z, walk straight past Stores U, T and R. Turn right and continue straight. ✓A</p> <p>Restaurant A will be on his left. ✓A</p> <p><i>Verlaat winkel Z en loop reguit verby Winkels U, T en R. ✓A</i></p> <p><i>Draai regs en gaan reguit vorentoe.</i></p> <p><i>Restaurant A sal aan jou regterkant wees.</i></p>	<p>1A turn right</p> <p>1A left and again right turn</p> <p>1A left side</p> <p>OR/OF</p> <p>1A go straight</p> <p>1A turn right</p> <p>1A left side</p> <p>(3)</p>	MP L2
2.1.4	Store M/Winkel M ✓✓A	2A correct store (2)	MP L2
2.1.5	<p>✓✓A</p> <p>Stairs OR direction of the stairs./</p> <p><i>Trappe OF die rigting van die trappe.</i></p>	2A feature (2)	MP L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
2.1.6	Total number of stores = 26 ✓A <i>Totale getal winkels</i> Number of stores with two doors = 5 ✓A <i>Aantal winkels met 2 deure</i> P = 5 ÷ 26 ✓CA ✓CA = 0,19 or/of 0,2	1A number of stores 1A stores with two doors 1CA answer as probability 1CA decimal final answer (4)	MP P L2
2.1.7	✓A It has more than one level. Stairs or escalators are shown on the plan showing that there is more than one level. ✓✓O OR Lifts are present <i>Dit het meer as een vlak. Trappe of roltrappe word op die plan getoon.</i> OF Daar is hysbakke	1A more than one 2O reasoning (3)	MP L4
2.1.8	1,6 cm = 4 m ✓M 1,6 cm = 400 cm ✓CA 1:250 ✓S✓A Accept measured value from 15 mm to 17 mm <i>Aanvaar gemete waardes vanaf 15 mm tot 17 mm</i>	1M measuring 1,6 cm 1CA conversion 1S simplification 1A ratio form (4)	MP L3
2.2.1 (a)	Fish/Vis ✓A	1A correct answer (1)	P L2
2.2.1 (b)	Apple/Appel ✓A	1A correct answer (1)	P L2
2.2.1 (c)	WVM/WGM ✓A	1A correct answer (1)	P L2
2.2.2	12 combinations/ <i>Kombinasies</i> ✓✓A	2A correct answer (2)	P L2
2.2.3	✓A $\frac{2}{12} = \frac{1}{6}$ ✓A	1A fraction 1A simplification (2)	P L2
		[29]	

QUESTION/VRAAG 3 [37 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
3.1.1	Volume of soil/ <i>Volume grond</i> $= 5\,302,125\text{ cm}^3 \times 80\%$ ✓M $= 4\,241,7\text{ cm}^3$ ✓CA $= 4\,242\text{ cm}^3$ ✓CA	1M multiplying by 80% 1CA volume of soil 1CA correct rounding (3)	M L1
3.1.2	Volume = Length \times Width \times Height $= 30\text{ cm} \times 12\text{ cm} \times 6\text{ cm}$ ✓SF $= 2\,160\text{ cm}^3$ ✓CA ✓A	1SF substitution 1CA answer 1A unit (3)	M L2
3.1.3 (a)	Thickness both sides/ <i>Dikte van beide kante</i> $= 2,5\text{ mm} \times 2 = 0,25\text{ cm} \times 2$ $= 0,5\text{ cm}$ ✓A Inner diameter/ <i>Binnemiddellyn</i> $= 75\text{ mm} \times 2 = 7,5\text{ cm} \times 2 = 15\text{ cm}$ ✓A Outer diameter/ <i>Buitemiddellyn</i> $= 15\text{ cm} + 0,5\text{ cm}$ ✓M $= 15,5\text{ cm}$ OR/OF Outer/ <i>Buiteradius</i> = $75\text{ mm} + 2,5\text{ mm} = 77,5\text{ mm}$ ✓M Outer diameter/ <i>Buitemiddellyn</i> = $77,5\text{ mm} \times 2$ ✓A $= 155\text{ mm}$ $= 15,5\text{ cm}$ ✓A	1A convert and multiply by 2 1A convert and multiply by 2 1 M adding OR 1 M adding 1A multiply by 2 1A convert (3)	M L2
3.1.3 (b)	Number of pots lengthwise/ <i>Getal potte lengtegewys</i> $= 70 \div 15,5 = 4,5$ ✓A $\therefore 4$ pots $\text{Length/Lengte} = 15,5\text{ cm} \times 4 = 62\text{ cm}$ ✓M ✓A $\text{Width/Breedte} = 15,5\text{ cm} \times 2 = 31\text{ cm}$ ✓A	1A rounded simplification or recognising the pots will be arranged 4×2 1M multiplying 1A simplification 1A simplification (4)	M L2
3.2.1	R39,99 for 14 kg Cost/ <i>Koste</i> per kg = $R39,99 \div 14$ ✓MA $= R2,86$ ✓CA	1MA dividing by 14 1CA answer per kg (2)	M/F L1

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
3.2.2	$1 \ell = 0,001 \text{ m}^3$ $X = 0,030 \text{ m}^3$ Volume = 30 litres ✓A Number of cups/ <i>Getal koppies</i> ✓C $= 30\,000 \text{ ml} \div 250 \text{ ml}$ $= 120$ ✓CA	1A number of litres 1C conversion 1CA number of cups (3)	M L3
3.2.3 (a)	Calcium/ <i>Kalsium</i> = $14 \text{ kg} \times 0,5\%$ ✓M $= 0,07 \text{ kg}$ ✓S $= 70 \text{ g}$ ✓C OR/OF $\text{Calcium}/\text{Kalsium} = 14\,000 \times 0,5\%$ ✓C ✓M $= 70 \text{ g}$ ✓S	1M multiply 14 kg by 0,5% 1S simplification 1C answer in grams OR/OF 1C conversion 1M multiply 14000 by 0,5% 1S simplification (3)	M L2
3.2.3 (b)	Zinc/ <i>Sink</i> = $14\,000 \text{ g} \times 2,5 \div 1\,000\,000$ ✓M $= 0,035 \text{ g}$ ✓CA	1M multiplying by 2,5 parts per million 1CA answer in grams (2)	M L2
3.2.3 (c)	Nitrogen/ <i>Stikstof</i> = $14\,000 \text{ g} \times 1,6\%$ ✓M $= 224 \text{ g}$ ✓CA Carbon/ <i>Koolstof</i> = $224 \text{ g} \times 15,5$ ✓M $= 3\,472 \text{ g}$ ✓CA	1M calculating nitrogen 1CA answer in grams 1M multiplying by 15,5 1CA answer in grams (4)	M L3
3.3.1	Thickness (base wood)/ <i>Dikte (houtbasis)</i> $= 92 \text{ cm} - (13+43+28,5) \div 3 \text{ cm}$ ✓MA $= 7,5 \text{ cm} \div 3$ ✓M $= 2,5 \text{ cm}$ ✓CA	1MA subtracting from 92 cm 1M dividing by 3 1CA answer (3)	M L2

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
3.3.2	<p>Surface area base/<i>Buiteoppervlaktebasis</i> in cm^2</p> $= 2 \times 30 \times 30 + 2 \times 30 \times 2,5 + 2 \times 30 \times 2,5$ $= 1\ 800 + 150 + 150 = 2\ 100$ <p>Surface area of a shelf/<i>Buiteopp. van 'n rak</i> in cm^2</p> $= 2 \times 22 \times 18 + 2 \times 22 \times 2,5 + 2 \times 18 \times 2,5$ $= 792 + 110 + 90 = 992$ <p>Total surface area/<i>Totale buiteopp</i> in cm^2</p> $= 2\ 100 + 3 \times 992$ $= 5\ 076$ <p>OR/OF <i>Area/Oppervlakte</i></p> $= (30 \times 30 \times 2) \text{ cm}^2 + (30 \times 2,5 \times 4) \text{ cm}^2$ $+ 3(18 \times 22 \times 2) \text{ cm}^2 + (18 \times 2,5 \times 6) \text{ cm}^2 + (22 \times 2,5 \times 6) \text{ cm}^2$ $= (1\ 800 + 300 + 2\ 376 + 270 + 330) \text{ cm}^2$ $= 5\ 076 \text{ cm}^2$	<p>CA from 3.3.1 1M surface area of the base wood 1S simplification</p> <p>1M surface area of the other pieces</p> <p>1MA adding base with 3 wood pieces 1CA answer in cm^2</p> <p>OR/OF 1M surface area of the base wood 2M surface area of the other three wood pieces 1S simplification 1CA answer in cm^2</p>	<p>M L3</p> <p>(5)</p>
3.3.3	<p>Balancing the weights of the pot plants. <i>Dit balanseer die gewigte van die potplante.</i></p> <p>OR/OF More space needed for the plants to grow. <i>Dit gee die nodige spasie vir die plante om te groei.</i></p> <p>OR/OF To accommodate different heights of the pot plants. <i>Om die verskillende hoogtes van die potplante te akkommodeer</i></p>	<p>2R any relevant reason</p> <p>(2)</p>	<p>M L4</p>
		[37]	

QUESTION/VRAAG 4 [27 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
4.1.1	648 km ✓✓ A	1A distance 1A unit km (2)	MP L1
4.1.2	Number of kilometres/ <i>Getal kilometer</i> $= 35 \ell \times 13 \text{ km}/\ell$ ✓M $= 455 \text{ km}$ ✓CA	1M multiplying 1CA simplification (2)	M L1
4.1.3 (a)	The kilometres to Grafton exceed the kilometres her car can travel with a full tank of petrol. <i>Die afstand na Grafton is verder as die kilometers wat haar motor met 'n vol tenk petrol kan ry.</i> OR/OF She will not be able to reach her destination with single fuel tank or with 35 litre fuel on the car. ✓✓O <i>Sy is nie in haar bestemming bereik met 'n vol tenk petrol of met 35 liter petrol nie.</i> OR/OF The car will run-out of petrol before her destination. <i>Die motor sal sonder petrol gaan staan voordat sy haar bestemming bereik het.</i>	2O reason (2)	M L4
4.1.3 (b)	Number of litres used/ <i>Getal liter gebruik</i> $= \frac{404}{13}$ ✓RT ✓M $= 31,0769\dots\ell$ ✓CA ✓M Cost / <i>Koste</i> = $31,077 \ell \times \$1,49 = \$46,30$ ✓CA Valid, it is more than \$40,00 ✓O <i>Geldig, dit is meer as \$40,00</i>	1RT distance 1M dividing by 13 1CA simplification 1M multiplying 1CA simplification 1O verification (6)	MP & M/F L4
4.2.1	✓O The same – 244 km on the phone and on the map <i>Dieselfde – 244 km op haar foon en op die kaart</i> ✓RT ✓MA $(648 - 404) \text{ km} = 244 \text{ km}$ OR/OF ✓RT ✓MA $162 \text{ km} + 82 \text{ km} = 244 \text{ km}$	1O statement 1RT reading correct values 1MA subtracting OR/OF 1RT correct values 1MA adding (3)	MP L3

Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
4.2.2	$2\text{hrs } 36\text{ min} = 2\text{ hrs} + \frac{36}{60}\text{h} = 2,6\text{ h}$ ✓C Distance = speed \times time/Afstand = <i>spoed</i> \times <i>tyd</i> $244\text{ km} = \text{speed}/\text{spoed} \times 2,6\text{ h}$ ✓SF $\text{Speed}/\text{Spoed} = \frac{244}{2,6}\text{ km/h}$ ✓M $\approx 93,85\text{ km/h}$ ✓CA	1C convert min to hours 1SF substitution 1M changing subject of the formula 1CA simplification (4)	M L3
4.2.3	A user pays to use a road./'n <i>Gebruiker betaal om die pad te gebruik</i> OR/OF Charge payable to use a road/ <i>Bedrag betaalbaar vir gebruik van pad</i> ✓✓O OR/OF A toll is an amount you have to pay to use that road. <i>'n Tol is 'n bedrag wat jy moet betaal om daardie pad te gebruik.</i>	2O statement (2)	MP L4
4.3.1	A strip map shows the straight line distance between towns or is not drawn to scale. ✓✓O <i>'n Strookkaart toon die reguitlynafstand tussen dorpe of dit is nie volgens skaal geteken nie.</i>	2O Difference (2)	MP L1
4.3.2	The journey by road is too long./ <i>Dit is te ver padlangs.</i> ✓✓O OR/OF The flight is shorter./ <i>Die vlug is korter</i> Or any other valid reason./ <i>Of enige ander geldige rede.</i>	2O Reason (2)	MP L4
4.3.3	To have transport when they reach their destination. <i>Om jou eie vervoer te hê by jou bestemming.</i> OR/OF She has too much baggage to take with her/many things she must take with her. ✓✓O <i>Sy het te veel bagasie om saam te neem/baie dinge wat sy saam met haar moet neem.</i> OR/OF Enjoy the scenery when driving./ <i>Om die natuurskoon te geniet terwyl sy ry.</i>	2O Reason (2)	MP L4
		[27]	

QUESTION/VRAAG 5 [29 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T/L
5.1	<p>Scale/Skaal = 1 : 300 The northern wall is/Die noordelike muur is</p> <p>18 m = 18 000 mm ✓C</p> <p>Scale length of the wall/Skaallengte van die muur is = $\frac{18\,000}{300}$ ✓M = 60 mm ✓CA</p>	<p>1C converting</p> <p>1M dividing</p> <p>1CA simplification</p> <p>(3)</p>	MP L2
5.2	<p>Critique/Kritiek ✓✓O</p> <p>The stage is not placed in a appropriate place if people need to sit in the 'bottom' part or in the southern part they will not see what is happening on the stage. <i>Die verhoog is nie op 'n goeie plek omdat mense wat in die 'onderste' deel of suidelike deel sit nie sal kan sien wat op die verhoog gebeur nie.</i></p> <p>OR/OF</p> <p>Stage not viewer or audience friendly for ALL. / <i>Die verhoog is nie kyker- of gehoorvriendelik vir ALMAL nie.</i></p> <p>OR/OF</p> <p>Audience at bottom left end will have limited view of stage occurrences/Die gehoor in die linker- onderste gedeelte sal 'n beperkte uitsig op die gebeure op die verhoog hê</p> <p>Solution/Oplissing</p> <p>Place the stage in the centre of the northern wall. <i>Plaas die verhoog in die middel van die noordelike muur</i></p> <p>OR/OF ✓✓O</p> <p>A triangular stage at top right corner would be seen by all with better ease. <i>'n Driehoekige verhoog in die regter boonste hoek sal gemaklik sigbaar wees vir almal.</i></p> <p>OR/OF</p> <p>Place the stage in the centre of the eastern wall. <i>Plaas die verhoog in die middel van die oostelike muur</i></p>	<p>2O critique</p> <p>2O solution</p> <p>(4)</p>	MP L4

Q/V	Solution/Oplissing	Explanation/Verduid.	T/L
5.3	<p>Length of wall behind the stage/<i>Lengte van muur agter verhoog</i> $= 18\text{ m} - 6\text{ m} = 12\text{ m}$ ✓M</p> <p>Missing length of southern wall/<i>Ontbrekende suielike muurlengte</i> $= 18\text{ m} - 9\text{ m} = 9\text{ m}$</p> <p>Area/<i>Oppervlakte</i> = $(18\text{ m} \times 12\text{ m}) + (6\text{ m} \times 9\text{ m}) - (5\text{ m} \times 10\text{ m})$ ✓SF $= 216\text{ m}^2 + 54\text{ m}^2 - 50\text{ m}^2$ ✓CA ✓CA ✓CA $= 220\text{ m}^2$ ✓CA OR/OF</p> <p>Area/<i>Oppervlakte</i> $= \text{Area of large square} - \text{area of bottom left rectangle} - \text{area of stage}$ ✓M $= \text{Opp groot vierkant} - \text{opp links onder reghoek} - \text{opp verhoog}$</p> <p>$= (18\text{ m} \times 18\text{ m}) - (9\text{ m} \times 6\text{ m}) - (5\text{ m} \times 10\text{ m})$ ✓SF $= 324\text{ m}^2 - 54\text{ m}^2 - 50\text{ m}^2$ ✓CA ✓CA ✓CA $= 220\text{ m}^2$ ✓CA OR/OF</p> <p>Area of the longer rectangle when 6 m is produced to the 18 m side + area of the rectangle with a stage – stage area ✓M <i>Oppervlakte van regoek indien 6 m verleng word tot by 18 m sy + oppervlakte van die reghoek by die verhoog – opp verhoog</i></p> <p>$= (18\text{ m} \times 9\text{ m}) + (12\text{ m} \times 9\text{ m}) - 50\text{ m}^2$ ✓SF $= 162\text{ m}^2 + 108\text{ m}^2 - 50\text{ m}^2$ ✓CA ✓CA ✓CA $= 270\text{ m}^2 - 50\text{ m}^2$ $= 220\text{ m}^2$ ✓CA</p>	<p>1M calculating 12 m side</p> <p>1SF substitution</p> <p>3CA area calculations</p> <p>1CA area to be tiled</p> <p>OR/OF</p> <p>1M formula to calculate required area</p> <p>1SF substitution</p> <p>3CA correct area</p> <p>1CA answer</p> <p>OR/OF</p> <p>1M formula to calculate required area</p> <p>1SF substitution</p> <p>3CA area calculated</p> <p>1CA area to be tiled</p> <p>(6)</p>	<p>M L3</p>

Q/V	Solution/ Oplossing	Explanation/Verduid	T/L
5.4	<p>Area of 1 tile / <i>Oppervlakte van 1 teël</i> $= 50 \text{ cm} \times 50 \text{ cm}$ ✓SF $= 2\,500 \text{ cm}^2$ $= 0,25 \text{ m}^2$ ✓C OR/OF $= 0,5 \text{ m} \times 0,5 \text{ m}$ $= 0,25 \text{ m}^2$</p> <p>The number of tiles needed/<i>Getal teëls nodig</i> $= \frac{220 \text{ m}^2}{0,25 \text{ m}^2}$ ✓M $= 880$ ✓CA</p> <p>5% more means they need 105% ✓M <i>5% meer beteken hulle het 105% nodig</i></p> <p>Number needed for the tiler/<i>Getal nodig vir die teler</i> $= 880 \times 105\%$ ✓MCA $= 924 \text{ tiles}$ ✓CA</p>	<p>CA from 5.3</p> <p>1SF Substitution 1C Conversion</p> <p>1M dividing by tile area 1CA number of tiles</p> <p>1M adding 5%</p> <p>1MCA multiply by 105% 1CA number of tiles needed</p> <p>(7)</p>	M L3
5.5	<p>Number of blue tiles needed/<i>Getal blou teëls</i> $= 924 \times \frac{4}{5}$ ✓M $= 739,2$ ✓CA</p> <p>Number of boxes of blue tiles needed/<i>Getal houers blou teëls</i> $= \frac{740}{10}$ $= 74$ ✓CA</p> <p>Number of grey tiles needed/<i>Getal grys teëls</i> $= 924 \times \frac{1}{5} = 184,8$ ✓M</p> <p>Number of boxes of grey tiles needed/<i>Getal houers grys teëls</i> $= \frac{185}{16}$ ✓M $= 11,56$ ✓CA ≈ 12</p> <p>Total cost/<i>Totale koste</i> $= 74 \times \text{R}250 + 12 \times \text{R}864$ ✓M $= \text{R}28\,868$ ✓CA</p> <p>The budget is sufficient/<i>Die begroting is genoegsaam</i> ✓O</p>	<p>CA from 5.4 1M calculating blue tiles</p> <p>1CA number of blue tiles</p> <p>1CA number of boxes</p> <p>1M calculating grey tiles</p> <p>1M dividing by 16 1CA number of boxes</p> <p>1M cost calculations 1CA cost amount</p> <p>1O opinion</p> <p>(9)</p>	MP/ F L4
		[29]	