Grade10 Mathematical Literacy: Memorandum

1.1.1 15,645 ✔ 1

1.1.2 83 ✔ 1

1.1.3 R281,25 ✔ ✔ 2

1.1.4 $2\frac{1}{4}$ ✔ 1

1.2 $33\frac{1}{3}$ % of R299 = R99,66 ✔
R299 − R99,66 = R199,34 ✔
OR
$66\frac{2}{3}$ % of R299 = R199,34 ✔ ✔ 2

1.3.1 It means that to every 1 measure of concentrate, ✔ you must add 4 measures of water. ✔ 2

1.3.2 200ml of concentrate ✔ and 800ml of water ✔ 2

1.3.3 $3\frac{1}{2}$ cups × 4 = 14 cups ✔ ✔
My friend did not mix it in the correct ratio but added too much water so it will not taste the same. ✔
OR
15 cups ÷ 4 = $3\frac{1}{4}$ cups
My friend did not have enough concentrate in the mixture to make it taste the same. 3

1.4.1 R55 + 5 × R10 = R105 ✔ ✔ 2

1.4.2 R55 + 7 × R10 = R135 ✔ ✔ 2

1.4.3 R55 + n × R10 = R55 + R10n ✔ ✔ 2

1.5.1 5,5% of R4 575 = R251,63 ✔
R4 575 + R251,63 = R4 826,63 ✔
OR
105,5% of R4 575 = R4 826,63 ✔ ✔ 2

1.5.2 Ali ✔ 1

1.5.3 Ali's % increase = $\frac{\text{R292.50}}{\text{R6 500}} \times 100 = 4{,}5\%$ ✔
Fatimah gets the bigger percentage increase. ✔ 2

1.6 Daily wage: $\frac{\text{R1 725}}{\text{15 days}}$ = R115 per day ✔ ✔
Earnings for 20 days: 20 × R115 = R2 300 ✔ 3

1.7 1cm = 50 000cm ✔
3,7cm = 185 000cm ✔
There are 100cm in 1m and 1 000m in 1km
∴ 1km = 100 000cm ✔
∴ 185 000cm ÷ 100 000 = 1,85km ✔ 4

1.8.1 $\bar{x}$ = (R49,50 + R172,00 + R185,50 + R113,50 + R139 00 + R405,00 + R54,50) ÷ 7 ✔
= R1 119 ÷ 7 ✔
= R159,86 ✔ 3

1.8.2 R49,50; R54,50; R113,50; R139 00; R172,00; R185,50; R405,00 ✔
Median = R139,00 ✔ 2

1.9.1 Area of rectangle:
9cm × 4,5cm = 40,5cm² ✔ ✔ 2

1.9.2 Circumference of the circle:
C = 3,14 × 4,5cm = 14,13cm ✔ ✔ 2

1.9.3 Volume of box:
6cm × 1,5cm × 2,5cm = 22,5cm³ ✔ ✔ 2

1.9.4 Surface area of box:
2 × 1,5cm × 2,5cm + 2 × 6cm × 2,5cm + 2 × 1,5cm × 6cm ✔ ✔ ✔
= 55,5cm² ✔ 4

2.1 Interest is the fee ✔ paid by a borrower ✔ to a lender ✔ for the use of borrowed money 3

2.2.1 Interest is calculated based on the new balance – in other words interest has been paid on interest ✔ ✔ 2

2.2.2 (a) = R1 762,34 ✔ ✔
(b) = R211,48 ✔ ✔
(c) = R1 973,82 ✔ ✔ 6

2.2.3 R1 973,82 − R1 000 = R973,82

2.2.4 $\frac{\text{R973.82}}{\text{R1 000}} \times 100 = 97{,}38\%$ ✔ ✔

2.2.5 6 × 12% = 72% ⇒ R720,00 ✔ ✔ ✔ 3

3.1 12 ÷ (12 + 12) ✔ ✔ = $\frac{1}{2}$ or 0,5 ✔ 3

3.2 8 ÷ (8 + 12) ✔ ✔ = 0,4 ✔
0,4 of 60 drops = 24 drops ✔ ✔ 5

3.3 4 ÷ 60 = 0,0667 ✔
∴ a ÷ (a + 12) = 0,0667 ✔
∴ a = 0,0667 × (a + 12) ✔
∴ a = 0,0667 a + 0,799
∴ a − 0,0667 a = 0,799
∴ 0,933 a = 0,799 ✔
∴ a = 0,856 ✔
The child is approximately one year old. ✔ 6

4.1 Female ticked ✔
Age: 13-14 ticked ✔
A lot ticked ✔ 3

4.2.1 35 males and 60 females ✔ ✔ 2

4.2.2 Total number of students taking part in survey = 95 ✔
Number of students felt a lot or an unbearable amount of pressure = 44 ✔
The counselor could have argued that $\frac{44}{95} \approx \frac{40}{100} \approx$ 2 out of every 5. ✔ ✔ 4

4.2.3 % of boys feeling pressured :
$\frac{14}{35}$ as a percentage
= 40% ✔ ✔
% of girls feeling pressured :
$\frac{30}{60}$ as a percentage
= 50% ✔ ✔
The data seems to show that girls feel the pressure more than boys. ✔ 5

4.2.4 (a) It creates the impression that there were a lot more girls participating in the survey than there were boys. ✔ ✔ 2

	(b) No. ✔ The actual ratio of boys to girls is 63:36 ≈ 2:1 ✔ and the graph creates the impression that the ratio is ≈ 5:1 ✔ (Length of female bar: length of male bar)	3
	(c) The counselor has not started the *x*-axis at zero. This tends to emphasise the difference between the boys and girls. ✔ ✔	2
4.2.5	(a) a = $\frac{3}{6}$ = 50% ✔ ✔ b = 100% − 50% ✔	3
	(b) "**Older** girls are more likely to experience a lot or an unbearable amount of pressure than **younger** girls" ✔ ✔ 60% of older girls experience a lot or an unbearable amount of pressure compared to 29% of younger girls. ✔ ✔	4
	(c) A double bar graph. It would be easy to compare both age groups to each other ✔ ✔ and the two categories within the age groups. ✔ ✔	4
5.1.1	17 ✔	1
5.1.2	Wednesday ✔ ✔	2
5.1.3	14:45 − 11:45 = 3 hours ✔ ✔ ✔	3
5.1.4	17:00 − 14:45 = 2 hours 15 minutes ✔ ✔ ✔	3
5.1.5	The movie will take at least 2 hours and 15 minutes. ✔ ✔ Therefore the movie will end at 22:15 plus 2 hours and 15 minutes which means it will end at half past twelve or 00:30 ✔ ✔	4
5.2.1	20 seats ✔	1
5.2.2	(a)R30,00 ✔ (b) R25,00 ✔ (c) R45,00 ✔	3
5.2.3	H8 and H9 ✔ ✔	2
5.2.4	L7 ✔ ✔	2
5.2.5	Category 1 tickets are the least expensive tickets. ✔ This seat is close to the screen ✔ but is off to the side of the room ✔ which means you do not get as good a view as you would if you were further back from the screen and in the centre of the room. ✔ Therefore it should be in the least expensive category. ✔	5
6.1	If you print 1 000 brochures it will cost you R5 per brochure ✔ ✔	2
6.2	1 000 × R5 ✔ ✔ = R5 000 ✔	3
6.3	2 500 × cost = R5 000 ✔ ✔ cost = R5 000 ÷ 2 500 cost = R2,00 ✔	3
6.4	Number of brochures × R20 = R5 000 ✔ ✔ Number of brochures = R5 000 ÷ R20 Number of brochures = 250 ✔	3
6.5	Decreases. ✔	1