GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GAUTENG DEPARTMENT OF EDUCATION

GAUTENGSE DEPARTEMENT VAN ONDERWYS

PROVINCIAL EXAMINATION

PROVINSIALE EKSAMEN

NOVEMBER 2020

GRADE/*GRAAD* 9

MATHEMATICS/*WISKUNDE*
(PAPER/*VRAESTEL* 1)

MEMORANDUM

4 pages/*bladsye*

SECTION/*AFDELING* A
QUESTION/*VRAAG* 1

1.1	C✓**A**	(1)
1.2	A✓**A**	(1)
1.3	A✓ **A**	(1)
1.4	C✓**A**	(1)
1.5	D✓**A**	(1)
		[5]

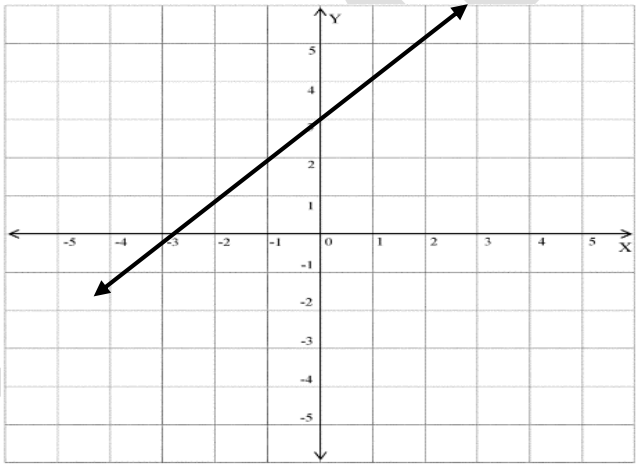
SECTION/*AFDELING* B
QUESTION/*VRAAG* 2

2.1	$x^2 + 3x - 5x - 15$ $= x^2 - 2x - 15$✓✓✓**A**	1 mark for each term/ *1 punt vir elke term* (3)
2.2	$\frac{a(b+1)}{ab}$ ✓ **M** $= \frac{b+1}{b}$ or $1 + \frac{1}{b}$✓✓**A**	1 mark for common factor/ *1 punt vir gemeenskaplike faktor* 1 mark numerator/ *1 punt vir teller* 1 mark denominator/ *1 punt vir noemer* **OR** 1 mark for common factor/*1 punt vir gemeenskaplike 2actor* 1 mark for 1/*1 punt vir 1* 1 mark $\frac{1}{b}$/*1 punt vir* $\frac{1}{b}$ (3)
2.3.1	$2(4k^2 - 1)$ ✓ **M** $= 2(2k - 1)(2k + 1)$ ✓✓**A**	1 mark for common factor/ *1 punt vir gemeenskaplike faktor* 2 marks for factorization/ *2 punte vir faktorisering* (3)
2.3.2	$(x - 3)(x - 4)$ ✓ ✓**A**	1 mark for each correct factor/*1 punt elk vir elke korrekte factor* (2)
2.3.3	$\frac{x(x+2)}{(x-2)(x+2)}$✓✓**M** $\frac{x}{x-2}$✓**A**	2 marks for common factor/2 *punte vir gemeenskaplike faktor* 2 marks for factorization/2 *punte vir faktorisering* 1 mark for answer/1 *punt vir antwoord* (5)
		[16]

QUESTION/VRAAG 3

3.1.1	$3x - x = -4 + 6$✓**M** $2x = 2$✓**CA** $x = 1$✓**CA**	1 mark for operation/*1 punt bewerking* 1 mark for dividing by 2/ *1 punt vir deling met 2* 1 mark for answer/*1 punt vir antwoord* (3)
3.1.2	$3^a = 3^4$✓ **M** $a = 4$✓ **A**	1 mark for 3^4/*1 punt vir* 3^4 1 mark for answer/1 *punt vir antwoord* (2)
3.1.3	$x - 1 = 0$ or/*of* $x + 3 = 0$ $x = 1$ or/*of* $x = -3$✓✓**A**	1 mark for each answer/ 1 *punt vir elke antwoord* (2)
3.1.4	$(4m + 8)(4m - 8) = 0$✓**M** $4m + 8 = 0$ or/*of* $4m - 8 = 0$ $4m = -8$ or/*of* $4m = 8$ $m = -2$ or/*of* $m = 2$✓✓**CA**	1 mark for factors/*1 punt vir faktore* 1 mark for each answer/ 1 *punt vir elke antwoord* (3)
3.2	Let the number of balls in the tin be x/ *Laat die aantal balle in elke houer* $= x$ There are 4 tins/*Daar is 4 houers* $4x + 7 = 27$✓✓**M** $4x = 27 - 7$✓**CA** $4x = 20$ $x = 5$✓**CA** **There are 5 balls in each tin./** ***Daar is 5 balle in elke houer.***	1 mark for multiplying x by 4/*1 punt vir vermenigvuldig met 4x* 1 mark for algebraic equation/*1 punt vir algebraïese vergelyking* 1 mark for additive inverse/ *1 punt vir optellingsinverse* 1 mark for answer/1 *punt vir antwoord* OR/*OF* Full marks for any similar reasoning and correct answer/ *Volpunte vir enige soortgelyke redenasie en korrekte antwoord* (4)
		[14]

QUESTION/*VRAAG* 4

4.1.1	30✓**A**	1 mark for answer/1 *punt vir antwoord* (1)
4.1.2	February & March/*Februarie & Maart* ✓**A** April & May/*April & Mei* ✓**A**	1 mark for answer/1 *punt vir antwoord* (2)
4.1.3	$30 - 25$✓ **M** 5✓**A**	1 mark for subtraction/*1 punt vir aftrekking* 1 mark for answer/1 *punt vir antwoord* (2)
4.1.4	Discrete. Fridges represent quantities which can be counted and they are whole. One cannot sell half a fridge. ✓**A** *Diskreet*✓*. Yskaste stel hoeveelhede voor wat getel kan word en hulle is heel. Jy kan nie 'n halwe yskas verkoop nie.* ✓	1 mark for discrete/*1 punt vir diskreet* 1 mark for the explanation/ *1 punt vir verduideliking* (2)
4.2.1	x: -2 | -1 | 0 | 1 | 2 y: 1 ✓**A** | 2 ✓**A** | 3 ✓**A** | 4 ✓**A** | 5 ✓**A**	1 mark for each correct y-value/*1 punt vir elke regte y-waarde* (5)
4.2.2	 ✓✓✓**A**	1 mark for correct gradient or shape/*1 punt vir gradiënt en vorm* 1 mark for correct x-intercept/1 *punt vir regte x-snypunt* 1 mark for correct y-intercept/1 *punt vir regte y-snypunt* (3)
		[15]
		TOTAL/*TOTAAL:* 50