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Graad 7 – Kwartaal 2 – Werkopdrag 3 – Oefenvraestel Junie 2025 Memorandum

Afdeling B – Eksponente

1.1 2 x 2 x 2 = 2^3 (1)
1.2 3 x 3 x 3 x 3 x 3 = 3^5 (1)
1.3 n x n x n x n = n^4 (1)

2.1 $\sqrt{9}$= 3 2.2 $\sqrt{196}$ = 14
2.3 $\sqrt[3]{8}$= 2 2.4 $\sqrt[3]{1000}$ = 10 (4)

3.1 5^2 = 25 3.2 7^0 = 1
3.3 $8^2 \div 4^2$ = 16 3.4 $10^3 - 4^3$ x 3^2 = 424 (4)

4.1 $6^1 < 2^3$ 4.2 $1^2 < 2^1$
4.3 $4^3 < 3^4$ 4.4 $3^5 > 5^3$ (4)

5.1 $2^4 + 3^3 = 16 + 27 = 43$ (1)
5.2 $5^3 - 4^3 = 125 - 64 = 61$ (1)
5.3 $3^4 \div 3^3 + \sqrt[3]{8} = 81 \div 27 + 2 = 5$ (1)

6.1 $\sqrt{16 + 9} = \sqrt{25} = 5$ (1)
6.2 $\sqrt{16} + \sqrt{9} = 4 + 3 = 7$ (1)
6.3 $\sqrt{144 - 23} = \sqrt{121} = 11$ (1)
6.4 $\sqrt{121} - \sqrt{100} = 11 - 10 = 1$ (1)

7.1 $(\sqrt[3]{18})^3 = 18$ 7.2 $(\sqrt[3]{42})^3 = 42$ (2)
7.3 $2\sqrt{9} + 4^2 = 2 \times 3 + 16 = 22$ (2)
7.4 $\sqrt{25+11} - (\sqrt[3]{4})^3 = 6 + 4 = 10$ (2)
7.5 $3^2 - \sqrt[3]{27} + 12^2 = 9 - 3 + 144 = 150$ (2)

Afdeling C – Gewone breuke

1.1 $\frac{18}{7} = 2\frac{4}{7}$ 1.2 $\frac{24}{5} = 4\frac{4}{5}$ (2)

2.1 $9\frac{4}{5} = \frac{49}{5}$ 2.2 $16\frac{7}{8} = \frac{135}{8}$ (2)

3.1 $\frac{15}{75} = \frac{1}{5}$ 3.2 $\frac{19}{57} = \frac{1}{3}$ (2)

4.1 $\frac{3}{4} = \frac{12}{16} = \frac{27}{36}$ 4.2 $\frac{9}{5} = \frac{18}{10} = \frac{63}{35}$ (4)

5.1 $3\frac{4}{7} + 6\frac{9}{21} = 3\frac{4}{7} + 6\frac{3}{7} = 9\frac{7}{7} = 10$ (3)

5.2 $12\frac{2}{5} - 7\frac{2}{3} = 12\frac{6}{15} - 7\frac{10}{15} = 4\frac{11}{15}$ (4)

6.1 $\frac{4}{7}$ van 84 $84 \div 7 = 12$ en $12 \times 4 = 48$ (3)

6.2 $\frac{22}{9}$ van 108 $108 \div 9 = 12$ en $12 \times 22 = 264$ (3)

6.3 $4\frac{2}{5}$ van 75 $75 \div 5 = 15$ en $15 \times 22 = 330$ (4)

6.4 $\frac{2}{5}$ van $\frac{7}{3} = \frac{2}{5} \times \frac{7}{3} = \frac{14}{15}$ (2)

6.5 50% van R120 $= \frac{50}{100} \times \frac{120}{1} = \frac{1}{2} \times \frac{120}{1}$ = R60 (3)

7.1 Oop getalsin: $\frac{3}{4}$ van R36 = x (1)

Bewerkings: $\frac{3}{4} \times \frac{36}{1}$ $36 \div 4 = 9$ en $9 \times 3 = 27$ (2)

Antwoord: is R27 (1)

7.2 Oop getalsin: $\frac{5}{6}$ = R400 $\therefore$ $\frac{1}{6}$ = Rx (1)

Bewerkings: $400 \div 5 = 80$ en $80 \times 5 = 400$

$\therefore \frac{1}{6}$ = R80 (2)

Antwoord: R80 x 6 = R480 was my sakgeld (1)

7.3 Oop getalsin: 20% van R300 = x (1)

Bewerkings: $\frac{20}{100} \times \frac{300}{1}$ $300 \div 100 = 3$ en $3 \times 20 = 60$ (2)

Antwoord: R300 – R60 = R240 sal ek vir die bril betaal (1)

7.4 Oop getalsin: 30% van 50 albasters = x (1)

Bewerkings: $\frac{30}{100} \times \frac{50}{1}$ $30 \times 50 = 1\,500$ en $1\,500 \div 100 = 15$ (2)

Antwoord: 15 albasters gee ek vir my maatjie (1)

Afdeling D – Desimale breuke

1.1 3, 75 1.2 0,497 (2)

2.1 $7{,}152 < 7{,}215$ 2.2 $5{,}512 > 5{,}125$ 2.3 $9{,}900 = 9{,}9$ (3)

3.1 $0{,}6 = \frac{6}{10} = \frac{3}{5}$ 3.2 $0{,}05 = \frac{5}{100} = \frac{1}{20}$ 3.3 $2{,}125 = 2\frac{125}{1000} = \frac{1}{8}$ (3)

4.1 $\frac{146}{1000} = 0{,}146$ 4.2 $\frac{13}{50} = 0{,}26$ 4.3 $15\frac{21}{125} = 15{,}168$ (3)

5.1 $6{,}9 = \frac{69}{10}$ 5.2 $4{,}48 = \frac{448}{100}$ (2)

6.1 13,154 6.2 10,376 (4)

7.1 561,6 7.2 260,05 (6)

7.3 1,278 7.4 1,718 (6)

8.1	Oop getalsin:	40,25 liter x R18,50 = x [Let op dat daar 2 syfers na elke komma is]	(1)
	Bewerkings:	40,25 x 18,50 = 744,6250	(4)
	Antwoord:	R744,62 is die totale bedrag	(1)
8.2	Oop getalsin:	13 meter ÷ 4 = y	(1)
	Bewerkings:	13 ÷ 4 = 3,25	(3)
	Antwoord:	Elke deel is 3,25 meter lank	(1)

Afdeling E – Heelgetalle [Positief en negatief]

1.1 $7 > 6$ 1.2 $19 < 91$

1.3 $-15 < 15$ 1.4 $21 > -12$

1.5 $0 > -10$ 1.6 $-9 = 3 \times -3$ (6)

2. $1;\ 16;\ -9;\ \sqrt[3]{64};\ 0;\ 3^3$ (3)

3.1 $(-7) + 9 = 2$ 3.2 $(-7) + (-9) = -16$

3.3 $7-(-9) = 16$ 3.4 $-7-(-9) = 2$ (4)

4.1 $-16 + 15 = -1$ 4.2 $-21 - 29 = -50$ 4.3 $36 - (20) = 16$ (3)

5.1 $x = 0$ 5.2 $x = 18$ 5.3 $x = -20$ (3)

6.1 -108 6.2 108 6.3 -90

6.4 -9 6.5 -11 6.6 8 (6)

7.1 Oop getalsin: $-3°C + 10°C = a$

Bewerkings: $-3°C + 10°C = 7°C$

Antwoord: Die temperatuur het gestyg met 7°C (3)

7.2 Oop getalsin: $46°C - (-9°C) = x$

Bewerkings: $46°C - (-9°C) = 55°C$

Antwoord: Die temperatuurverskil is 55°C (3)

Afdeling F – Numeriese en meetkundige patrone

1.1 3; 6; 9; 12; **15; 18; 21…** (3)

1.2

1	→	x 3	→	**3**
2	→		→	**6**
3	→		→	**9**
4	→		→	**12**
5	→		→	15
6	→		→	18

(6)

1.3

Term se posisie in die ry	1	2	3	4	5	6	12	19
Term in die ry	3	6	9	**12**	**15**	**18**	**36**	**57**

(5)

2.1

Posisie in die ry	1	2	3	7	12
Term	2	4	6	**14**	**24**

Reël: x 2 (3)

2.2

Posisie in die ry	1	2	3	7	12
Term	3	4	5	**9**	**14**

Reël: x 1 + 2 (3)

2.3

Posisie in die ry	1	2	3	7	12
Term	3	7	11	**27**	**47**

Reël: x 4 – 1 (3)

3.1 Elke patroon vermeerder met 3 blokkies. (1)

3.2 4de patroon sal 14 blokkies hê. (1)

3.3 x 3 + 2 (2)

3.4

Patroon	1	2	3	4	9	15	**33**
Kolletjies	5	8	11	**14**	**29**	**47**	101

(4)

Afdeling G – Funksies en verwantskappe

1.

Uitdrukking	Terme	Veranderlike/s	Konstante/s	Koëffisiënt/e
7	**1**	**Geen**	**7**	**Geen**
$2x$ x 6	**1**	x	**6**	**2**
$15a$ ÷ 3 + 6	**2**	a	**6**	**15**
$\frac{1}{4} - 5x + 3 \times n$	**3**	x en n	$\frac{1}{4}$	**5 en 3**

(16)

2.1 $x = 879 - 456 = 423$ (2)

2.2 $x = 625 \div 5 = 125$ (2)

2.3 $x = 78{,}3 - 37{,}9 = 40{,}4$ (2)

2.4 $x = 17 \times 17 = 289$ (2)

2.5 $x = 112 \div 4 = 28$ (2)

2.6 $x = 143 - 15 \times 8 = 23$ (2)

3.1 $y = 31 - 7 = 24$ (2)

3.2 $a - 21 = 81$ $a = 81 + 21 = 102$ (2)

3.3 $6z = 138$ $z = 138 \div 6 = 23$ (2)

3.4 $\frac{27+39-6}{x} = 15$ $x = \frac{60}{4} = 15$ (2)

3.5 $19{,}3 + 7{,}8 \times 10 = m$ $m = 19{,}3 + 78 = 97{,}3$ (2)

4.1 $y = 12 + 7 = 19$ (2)

4.2 $y = 9 \times 15 = 135$ (2)

4.3 $y = 17{,}3 + 21{,}6 = 38{,}9$ (2)

4.4 $y = 2\frac{1}{3} + 6\frac{3}{4} = 2\frac{4}{12} + 6\frac{9}{12} = 8\frac{13}{12} = 9\frac{1}{12}$ (3)

4.5 $y = \frac{68}{17} = 4$ (2)