



Taak 3A/ Task 3A  
Algebraïese Uitdrukkings/ ALGEBRAIC EXPRESSIONS  
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30 min  
25 punte/ marks

Instruksies en Inligting: /INSTRUCTIONS AND INFORMATION:

1. Die vraestel bestaan uit 4 vrae. THIS PAPER CONSISTS OF 4 QUESTIONS
2. Beantwoord alle vrae. ANSWER ALL QUESTIONS.
3. Die vraestel bestaan uit 3 bladsye. THIS PAPER HAS 3 PAGES.

25

NAAM: Memo Gr.8.

Vraag / Question 1

Skryf die volgende algebraïese uitdrukking in die eenvoudigste vorm.

Write the following algebraic expression in the simplest form.

$$3a \times 2b \times 3a \times 2a \div 6c$$

$$\frac{36a^3b}{6c}$$

$$\frac{6a^3b}{c} \quad \checkmark \checkmark$$

(2)

Vraag / Question 2

Gebruik die volgende uitdrukking en beantwoord die vrae wat volg.  
Use the given algebraic expression and answer the questions that follows.

$$-5m^3 - 3y^2 \times 5 + 2m \times 2y - 3$$

2.1 Gee die aantal terme. Give the number of terms. (1)

$$\underline{4} \quad \checkmark$$

2.2 Gee die koëffisiënt van  $m^3$ . Give the coefficient of  $m^3$ .

$$\underline{-5} \quad \checkmark$$

(1)

2.3 Gee die konstante term. Give the constant term.

$$\underline{-3} \quad \checkmark$$

(1)

Vraag / Question 3

Vereenvoudig die volgende uitdrukkinge en bereken waar nodig.  
*Simplify the following expressions and calculate where needed.*

3.1  $-5a - ab + 7a + 2b + ab - 6b$

$$\begin{aligned} & \checkmark \quad \checkmark \\ & = 2a - 4b \end{aligned} \quad (2)$$

3.2

$$\begin{aligned} & \frac{25m^5n^4}{-5m^8n^2} \\ & = -5m^{-3}n^2 \end{aligned} \quad (2)$$

3.3  $3xy(2x^3 + 4xy^2)$

$$\begin{aligned} & \checkmark \quad \checkmark \\ & = 6x^4y + 12x^2y^3 \end{aligned} \quad (2)$$

3.4

$$\begin{aligned} & \frac{7x^4 \times 3x^2}{3x^3} \\ & \frac{21x^6}{3x^3} = 7x^3 \end{aligned} \quad (2)$$

3.5  $\frac{15a^3 - 12a + 9a^2}{3a}$

$$\begin{aligned} & \checkmark \quad \checkmark \quad \checkmark \\ & = 5a^2 - 4 + 3a \end{aligned} \quad (3)$$

Vraag / Question 4

Vereenvoudig die volgende. / *Simplify the following.*

4.1  $\sqrt{16a^8b^{12}} - \sqrt[3]{-8a^{12}b^{18}}$

$$\begin{aligned} & \checkmark \quad \checkmark \\ & = 4a^4b^6 - (-2a^4b^6) \\ & = 4a^4b^6 + 2a^4b^6 \\ & = 6a^4b^6 \end{aligned} \quad (3)$$

4.2  $\frac{-14p^3 - 6p^2}{-2p} - \frac{25p^4 - 5p^3}{-5p^2}$

$$\begin{aligned} & \checkmark \\ & = 7p^2 + 3p + 5p^2 - p \\ & = 12p^2 + 2p \end{aligned} \quad (3)$$

4.3

$$\begin{aligned} & -(3x^2)^3 + (-2x^3)^2 \\ & = -27x^6 + 4x^6 \\ & \hline & = -23x^6 \end{aligned}$$

(3)

TOTAAL / TOTAL: 25