

THE PROLINE TOPICAL ASSESSMENT 2022

TOPIC : ALGEBRA
CLASS : UPPER PRIMARY
DURATION : 2 hours 30 minutes

Volume One

Name : _____

School : _____

District : _____

Read the following instructions carefully:

1. This paper has two sections: **A** and **B**.
2. Section **A** has **20** questions (**40 Marks**)
3. Section **B** has **12** questions (**60 Marks**)
4. Attempt all questions in both sections. All answers to both sections **A** and **B** must be written in the spaces provided.
5. All answers must be written in **blue** or **black** ball point pens or **ink**. Only diagrams and graph work must be done in pencil.
6. Unnecessary **alteration** of work will lead to loss of marks.
7. Any **handwriting** that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the boxes indicated.

"FOR EXAMINER'S USE ONLY"

For examiner's use only

PAGES	MARKS	INITIALS
Page 1		
Page 2		
Page 3		
Page 4		
Page 5		
Page 6		
Page 7		
Page 8		
Page 9		
Total		

Please Turn over

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SECTION A : (40 MARKS)

Attempt **all** questions in this section
Question **1** to **20** carry **two** marks each

1	Collect like terms: $5p + 2p$	2	Find the missing number <div style="display: inline-block; border: 1px solid black; width: 40px; height: 25px; vertical-align: middle;"></div> - 4 = 28
3	Given that $m = 6$, $n = 8$, find the value of mn	4	Phillip is 5 times as old as Dan. If Dan is d years old. Write the expression for Phillips' age
5	Factorise: $4m - 6n$	6	If $a = -1$, $b = 5$ Find the value of $2^a - b^a$
7	Given that $m = 12$, $n = 2$ and $r = -6$, find the value of $\frac{mn}{10 + r}$	8	Simplify : $2m + m + 3m - 4m$

9	Simplify: $5ab - xy - ab + 7xy$	10	Simplify: $\frac{1}{y} \div y^{-3}$
11	Simplify: $8p - p + 2p$	12	Solve: $2(3g - 5) - 3(1 - g) = 14$
13	Simplify: $p^3 \times p$	14	If $a = 35$ and $b = 20$, find the value of $(a - b)(a + b)$

15	Solve for <i>n</i> : If $\frac{1}{5}\mathbf{n} = 1\frac{3}{5}$	16	Given that <i>m</i> = 2 and <i>y</i> = -3 Workout: $\frac{2(\mathbf{ym})+2}{(\mathbf{m-y})-6}$
17	Simplify: $(9\mathbf{k} + 6) - (4\mathbf{k} + 7)$	18	Simplify: $5\mathbf{m} - 2(3 - \mathbf{m})$
19	Solve the inequality: $5\mathbf{p} - 5\mathbf{q} + 4\mathbf{p} + 4\mathbf{q}$	20	Solve: $\frac{5}{6}\mathbf{w} - 7 = 3$

SECTION B : (60 MARKS)Attempt ***all*** questions in this sectionMarks for **each part** of the question are indicated in the brackets**21**Given that $r = 8$, $m = \frac{1}{2}r$ and $n = 4r$ Find the value of :**(i)**

$$r + m + n$$

(04 marks)**(ii)**

$$n(r - m)$$

(02 marks)**22**

Simplify: $\frac{g+1}{4} + \frac{2g-3}{6}$

(04 marks)

23	<p>(a) Solve: $2^m \div 8 = 2^4$ (03 marks)</p>
(b)	<p>Simplify: $\frac{b^3 \times b^2}{b^5}$ (02 marks)</p>
24	<p>Solve and list the solution set: $2p - 2 < \frac{1}{5}p + 16$ (04 marks)</p>
25	<p>Allan is $\frac{3}{4}$ as old as Ben, in 2 years' time, their total age will be 46 years.</p>
(a)	<p>How old is Ben today? (03 marks)</p>
(b)	<p>How old was Allan three years ago? (02 marks)</p>

26	Solve: $\frac{1}{2}(m + 6) - 1 = \frac{1}{3}(5 + m + 7)$	(04 marks)
27	Samuel bought a book at sh 4000 . He used 11 coins to pay the money. If he used sh 500 coins and sh 200 coins.	
(a)	How many coins of sh 500 did he use ?	(04 marks)
(b)	Find the number of sh 200 coins that he used.	(02 marks)
28	Factorise completely: $12m^2n - 8mn^2$	(04 marks)

29	<p>A fountain pen costs a third the cost of 2 exercise books. A boy paid sh 7500 for 3 books and 3 fountain pens.</p> <p>(a) Find the cost of one fountain pen. (04 marks)</p> <p>(b) How much is the cost of a book? (02 marks)</p>
30	<p>During the preparation for the study tour in a certain school, a Primary Two pupil paid sh 4000 more than the Primary One pupil a Primary Three pupil paid a half the sum of the money paid by the Primary One child and the Primary two child.</p> <p>A parent who had twins in P.1 , a child in P.2 and another in P.3 paid for all his children sh 42,000.</p> <p>(a) How much did he pay for each of the twins? (04 marks)</p> <p>(b) How much more did he pay for the P.3 pupil than the P.1 pupil (02 marks)</p>

31	Solve: $2(3m - 5) - 5(m - 2) = \frac{1}{3}(4m + 2) - (m - 6)$ (04 marks)
32	James is $\frac{1}{4}$ as old as his mother and he is $\frac{1}{7}$ as old as his grandfather. The difference between the age of his grandfather and his mother is 24.
(a)	How old is James' mother ? (04 marks)
(b)	Find how old James' grandfather will be in 5 years' time? (02 marks)

END