EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
36	55 minutes	3

Name: _____ Class: _____

Date: _____

MARK ____ / 36

INSTRUCTIONS AND INFORMATION

1. Answer **ALL** the questions in this question paper.
2. Answer QUESTION 1 by **circling** the letter (A–D) in the answer grid at the end of that section.
3. Show **ALL** calculations clearly.
4. Show all units where applicable.
5. Number the answers correctly according to the numbering system used in this question paper.
6. A non-programmable calculator may be used, unless stated otherwise.
7. Write neatly and legibly.

QUESTION 1 [10 MARKS]

Four options are given as possible answers to the following questions. Choose the correct answer and circle the letter (A–D) in the grid at the end of this section. If you want to change your choice, put a cross through the wrong letter and circle your new choice.

1.1 Solve simultaneously: $x + y = 10$ and $x - y = 4$. (1)

A) $x = 7$ and $y = 3$ **B)** $x = 14$ and $y = 6$

C) $x = 3$ and $y = 7$ **D)** $x = 6$ and $y = 4$

1.2 Solve simultaneously: $y = 2x + 1$ and $3x + y = 11$. (1)

A) $x = 3$ and $y = 7$ **B)** $x = 2$ and $y = 5$

C) $x = 5$ and $y = 2$ **D)** $x = 2$ and $y = 4$

1.3 Solve simultaneously: $2x + 3y = 12$ and $2x - y = 4$. (1)

A) $x = 2$ and $y = 3$ **B)** $x = 6$ and $y = 0$

C) $x = 3$ and $y = 2$ **D)** $x = 3$ and $y = 4$

1.4 On a set of axes, the solution of a pair of simultaneous linear equations is ... (1)

A) the point where the two lines cut **B)** the gradient of both lines

C) the y-intercept of both lines **D)** the point where each line cuts the x-axis

1.5 If the two lines are PARALLEL, the simultaneous equations have ... (1)

A) one solution **B)** two solutions

C) infinitely many solutions **D)** no solution

1.6 Three pens and two books cost R74. One pen and one book cost R32. A book costs ... (1)

A) R42 **B)** R10

C) R32 **D)** R22

1.7 Solve simultaneously: $5x + 2y = 16$ and $3x - 2y = 8$. (1)

A) $x = 24$ and $y = 0{,}5$ **B)** $x = 3$ and $y = 1$

C) $x = 3$ and $y = 0{,}5$ **D)** $x = 3$ and $y = -0{,}5$

1.8 The sum of two numbers is 25 and their difference is 7. The SMALLER number is ... (1)

A) 9 **B)** 18

C) $12{,}5$ **D)** 16

1.9 To eliminate y from $3x + 2y = 7$ and $5x + 3y = 11$, multiply ... (1)

A) both equations by 6 **B)** the first by 5 and the second by 3

C) the first by 3 and the second by 2 **D)** the first by 2 and the second by 3

1.10 Is $(x\,;\,y) = (4\,;\,-1)$ a solution of $2x + 3y = 5$ and $x - y = 5$? (1)

A) no — it satisfies neither **B)** yes — it satisfies both equations

C) it satisfies only the second **D)** it satisfies only the first

ANSWER GRID — CIRCLE YOUR ANSWERS FOR QUESTION 1

1.1	A	B	C	D
1.2	A	B	C	D
1.3	A	B	C	D
1.4	A	B	C	D
1.5	A	B	C	D
1.6	A	B	C	D
1.7	A	B	C	D
1.8	A	B	C	D
1.9	A	B	C	D
1.10	A	B	C	D

QUESTION 2 [12 MARKS]

Solve the following simultaneously. Show ALL your working.

2.1 $2x + 4k = 20$ and $3x - 2k = 6$ (5)

2.2 $y = 2x$ and $x + y = 9$ **(3)**

2.3 A farmer counts 30 heads and 80 legs among his chickens and cows. Determine, WITH THE USE OF TWO EQUATIONS, how many of each he has. **(4)**

QUESTION 3 [14 MARKS]

Answer the word problems below, using simultaneous equations.

3.1 Three apples and two pears cost R16, while one apple and four pears cost R12. Determine the price of each fruit. **(5)**

3.2 Explain what the solution of a pair of simultaneous linear equations represents graphically, and what it means if there is NO solution. **(4)**

3.3 A cinema charges R60 for an adult and R35 for a child. 120 tickets were sold for R5 725. Determine how many of each were sold. **(5)**

TOTAL: 36 marks

This question paper consists of 3 questions.

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