

Linear Relations - Exit Slip # 1 - Answer Key

1 a) Complete the table below (3 marks)

Input , x	Output , y
1	12
2	17
3	<b>22</b>
4	<b>25</b>
5	<b>27</b>

b) Write an equation to describe the relationship between x and y (1 mark).

$$Y = 5x + 7$$

c) Use your equation to find y when x = 9 (1 mark).

$$Y = 5(9) + 7$$

$$Y = 45 + 7$$

$$Y = 52$$

2) Describe the pattern in each table of values (5 marks)

x	y
-2	8
-1	6
0	4
1	2
2	0

x increases by **1** each time.

Y decreases by **2** each time.

The relation is **linear**, because a **constant** change in x produces a constant change in **y**.

3) In each equation, find the value of E when n = 5 (1 mark each)

a)  $E = 7 + n$

$$E = 7 + 5$$

$$E = 12$$

b)  $E = 4n - 6$

$$E = 4(5) - 6$$

$$E = 20 - 6$$

$$E = 14$$

Unit 4 Vocabulary ( /18 Marks)

1	Vertical Axis	16	y-coordinate
2	Horizontal Axis	9	Contains numbers, variables and/or operation symbols
3	Linear Relation	18	x - coordinate
4	Discrete Data	14	A mathematical statement that shows two expressions are equal.
5	Graph	4	Data on the graph that is not joined with a line.
6	Increase	2	x-axis
7	Decrease	5	A visual representation that shows a numerical relationship.
8	Pattern	7	To go down
9	Algebraic Expression	3	When the graph of a relation is a straight line.
10	Variable	6	To go up
11	Constant	1	y-axis
12	Numerical Coefficient	8	A design or sequence that is predictable because part of it repeats.
13	Value	12	$Y=3x + 7$
14	Equation	13	How much something is worth or the output of a calculation.
15	Relation	10	$Y=3x + 7$
16	(3, 4)	15	When two variables are related, they form a ...
17	Ordered Pair	11	$Y=3x + 7$
18	( 3, 4	17	A set of two numbers named in a specific order; represented by (x, y)