

TEACHER'S NAME:

NAME:

CLASS:

6.1 LINEAR EQUATIONS IN ONE VARIABLE**NOTES**

- A linear equation is an equation that involves a combination of one or more algebraic expressions with the power of the variable being one.
- Example: (Linear Equation in One Variable, Example: $2x + 3 = 5$)
- (Linear Equations in Two Variables, Example: $x + y = 7$)

A Write for the linear equation below either in one variable or two variables.

(Hint: Write No. 1 or 2 in a circle)

$$\frac{p}{4} + 1 = 5p$$



$$6m - n = 3$$



$$ab = 5$$



$$z = 10$$



$$8f + 3 = 15$$



$$\frac{8}{3} - n = 12$$



$$\frac{2f}{9} + 8 = 2$$



$$3(r - 5) = 7$$



$$h - 2k = 8$$



$$3(4 + g) = g$$



B Select all linear equations in one variable.

5p + 7p = 1

$3r^2 + r = 8$

$\frac{3}{7}n - 1 = m$

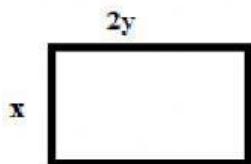
$12 - k = \frac{k}{3}$

C Determine whether the following equations are linear equations in one variable or not.

a	$c + 23 = 2$	YES	NO
b	$q - 8 = 31q$	YES	NO
c	$x^2y - x = 25$	YES	NO

D Derive one linear equation for each of the following statements or situations.

a) What is the perimeter of the diagram below. (Hint: Write in alphabetical order)



Perimeter, P = _____

b) Solve the equation for the linear equation below.

i) $a + 3 = 10$

$a = 10 - 3$

$a = _____$

ii) $2a + 3 = 13$

$2a = 13 - 3$

$a = (13 - 3)/2$

$a = _____$

iii) $2x - 1 = 5$

$x = _____$

iv) $3c + 2 = 8$

c = _____

v) $5(d - 3) = 2d$

d = _____

vi) $5t + 3 = 2t + 15$

t = _____

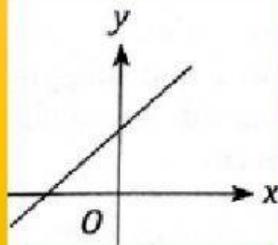
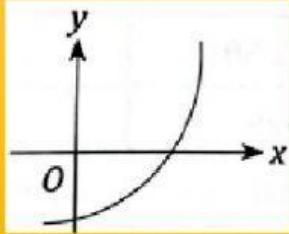
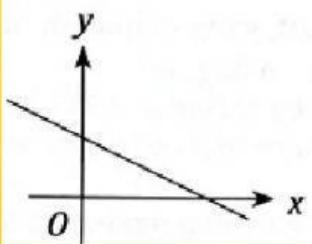
6.2 LINEAR EQUATIONS IN TWO VARIABLES

NOTES

- A linear equation in two variables is a linear equation that has two variables and the power of each variable is one.

Example : $m = 5 + n$

E Mark / on the diagram that represents the linear equation in two variables graphically and mark X if it is not.



E Mark / for linear equations in two variables mark X if not.

a	$20 - h = 4h$	<input type="checkbox"/>
b	$3r + 23 = 11s$	<input type="checkbox"/>
c	$16f + f = 19$	<input type="checkbox"/>

F Match the linear equations in the two variables based on the situation below.

The number of male and female students in class 5 Murni is 35 people

$$0.8x + y = 10$$

The price of a chicken satay is 80 sen while meat satay is RM 1. Husna pays RM 10 for all the satay she buys.

$$5x + 7y = 58$$

Puan Rohaya spent RM 58 to buy 5 kg of milk melon and 7 kg of starfruit.

$$x + y = 35$$

G Solve with a graph representation.

a) The price for 2 mango and 3 guava is RM 8. The price for 3 mango seeds and one guava is RM 5.

i) Construct a simultaneous linear equation in two variables based on the above situation.

If x is the price of a mango, and y is the price of a guava.

$$\underline{\quad} x + \underline{\quad} y = 8$$

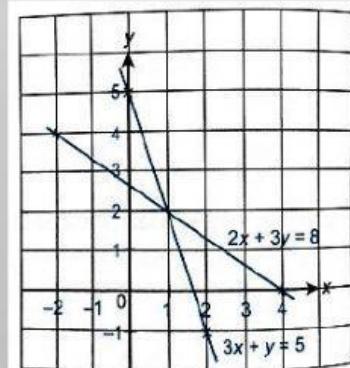
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$$\underline{\quad} x + \underline{\quad} y = 5$$

ii) Represent the following simultaneous linear equations graphically.

x	-2	4
y		

x	0	2
y		



So, the solution to the above simultaneous equation is _____.

(Write answers in coordinates. Example: (1,0))

H Solve

$$3p + q = 11 \text{Equation 1}$$

$$4p - 3q = -7 \text{Equation 2}$$

From(1)

$q = 11 - 3p$ substitute in(2)

$$4p - 3(\underline{\quad}) = -7$$

$$p = \underline{\quad}$$

To find the value of q , substitute in (2)

$$q = 11 - 3(\underline{\quad})$$

$$q = \underline{\quad}$$

I Solve. (Drag the appropriate answer choice)

x = 3 , y = 2

x = 9 , y = 6

x = 2 , y = 9

a) $x + y = 15$.
 $3x - 2y = 15$



b) $y - 2x = 5$.
 $5y + 2x = 49$



c) $4x + y = 14$.
 $2x + 3y = 12$



J Solve. (Choose the correct answer)

a

Solve the equation $13r - \frac{3}{4} = -7r$.

$\frac{1}{65}$

$\frac{4}{35}$

$\frac{3}{80}$

$\frac{2}{75}$

b

Solve the equation $19w - 33 = \frac{2}{3}(18 + 6w)$.

6

5

4

3

c

Solve the equation $\frac{x+17}{2} = 2x - 8$.

10

11

12

13

d

Given $2p + 3q = 8$.

Find the value of p if $q = 2$.

1

3

5

7

e

Given $3p - q = 11$.

Find the value of q if $p = 5$.

1

2

4

6