Jawapan

Praktis 6

Praktis Formatif

1 A Bukan persamaan linear dalam satu pemboleh ubah.
Not a linear equation in one variable.
B Bukan persamaan linear dalam satu pemboleh ubah.
Not a linear equation in one variable.
C Persamaan linear dalam satu pemboleh ubah.
A linear equation in one variable.
D Bukan persamaan linear dalam satu pemboleh ubah.
Not a linear equation in one variable.
Jawapan/*Answer*: **C**

2 (a) Tidak/*No* (b) Ya/*Yes*
(c) Ya/*Yes* (d) Tidak/*No*

3 (a) Hasil tambah a dan 3 ialah 10. *The sum of a and 3 is 10.* → $3 = a + 10$
(b) Tiga kali a ialah 10. *Three times a is 10.* → $3a = 10$
(c) Beza antara a dengan 10 ialah 3. *The difference between a and 10 is 3.* → $a + 3 = 10$
(d) 3 ialah 10 lebih daripada a. *3 is 10 more than a.* → $a - 10 = 3$

4 (a) $5x = 12$
(b) $m + 70 = 150$

5 $2x + 3 = 23$

6 (a) $p - 3 = -8$ → -5
(b) $p + 7 = 11$ → 4
(c) $-5p = 10$ → -2
(d) $\frac{3p}{4} = -6$ → -8

7 $2y = 3 - 2y$
$4y = 3$
$y = \frac{3}{4}$
Jawapan/*Answer*: **C**

8 (a) $x = 2x + 1$ ✓
(b) $6x - 11 = 5x - 10$ ☐
(c) $\frac{1}{2}x + 3 = x + 4$ ☐
(d) $3x - 8 = 7x - 4$ ✓

9 (a) Masa perjalanan kereta = $3\frac{1}{2}$ jam
Time of journey for the car = $3\frac{1}{2}$ *hours*
$3\frac{1}{2} = 5 - x$
(b) $x = 5 - 3\frac{1}{2}$
$x = 1\frac{1}{2}$

10 (a) $900 = 4x$
(b) $x = \frac{900}{4}$
$= 225$

11 A Persamaan linear dalam dua pemboleh ubah.
A linear equation in two variables.
B Bukan persamaan linear dalam dua pemboleh ubah.
Not a linear equation in two variables.
C Persamaan linear dalam dua pemboleh ubah.
A linear equation in two variables.
D Persamaan linear dalam dua pemboleh ubah.
A linear equation in two variables.
Jawapan/*Answer*: **B**

12 (a) $6x + 4y = 35$ (b) $x = 43 - y$

13 (a) $x = y + 16$
(b) $x : y = 5 : 3$
$\frac{x}{y} = \frac{5}{3}$
$3x = 5y$

14 (a) $3x + y = 12$
$3(2) + y = 12$
$6 + y = 12$
$y = 6$
Penyelesaian/*Solution*: (2, 6)
(b) $7x - 2y = 8$
$7x - 2(-4) = 8$
$7x + 8 = 8$
$7x = 0$
$x = 0$
Penyelesaian/*Solution*: (0, −4)

(c) $5x - 13y = -2$
$5(-3) - 13y = -2$
$-15 - 13y = -2$
$-13y = 13$
$y = -1$
Penyelesaian/*Solution*: $(-3, -1)$

(d) $-4x + 9y = 5$
$-4x + 9(-3) = 5$
$-4x - 27 = 5$
$-4x = 32$
$x = -8$
Penyelesaian/*Solution*: $(-8, -3)$

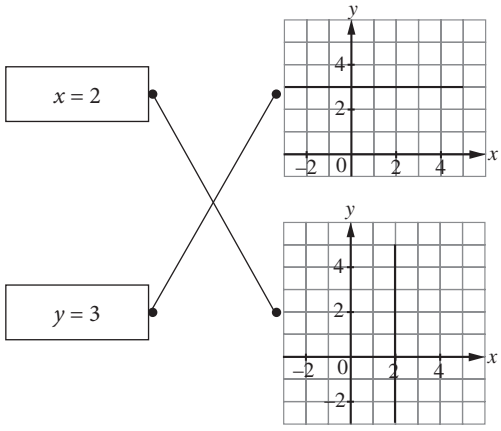
15 (a) $5x - 8y = 18$
Apabila/*When* $x = -1$, $y = 2$,
$5x - 8y = 5(-1) - 8(2)$
$= -5 - 16$
$= -21$
$\neq 18$
$x = -1$, $y = 2$ bukan penyelesaian bagi persamaan $5x - 8y = 18$.
$x = -1$, $y = 2$ *is not a solution for the equation* $5x - 8y = 18$.
Apabila/*When* $x = 2$, $y = -1$,
$5x - 8y = 5(2) - 8(-1)$
$= 10 + 8$
$= 18$
$x = 2$, $y = -1$ ialah penyelesaian bagi persamaan $5x - 8y = 18$.
$x = 2$, $y = -1$ *is a solution for the equation* $5x - 8y = 18$.

(b) $7x + y = 26$
Apabila/*When* $x = 3$, $y = 5$,
$7x + y = 7(3) + 5$
$= 21 + 5$
$= 26$
$x = 3$, $y = 5$ ialah penyelesaian bagi persamaan $7x + y = 26$.
$x = 3$, $y = 5$ *is a solution for the equation* $7x + y = 26$.
Apabila/*When* $x = -2$, $y = 12$,
$7x + y = 7(-2) + 12$
$= -14 + 12$
$= -2$
$\neq 26$
$x = -2$, $y = 12$ bukan penyelesaian bagi persamaan $7x + y = 26$.
$x = -2$, $y = 12$ *is not a solution for the equation* $7x + y = 26$.

(c) $x - 10y = -5$
Apabila/*When* $x = 5$, $y = 1$,
$x - 10y = 5 - 10(1)$
$= 5 - 10$
$= -5$
$x = 5$, $y = 1$ ialah penyelesaian bagi persamaan $x - 10y = -5$.
$x = 5$, $y = 1$ *is a solution for the equation* $x - 10y = -5$.
Apabila/*When* $x = -7$, $y = -5$,
$x - 10y = -7 - 10(-5)$
$= -7 + 50$
$= 43$
$\neq -5$
$x = -7$, $y = -5$ bukan penyelesaian bagi persamaan $x - 10y = -5$.
$x = -7$, $y = -5$ *is not a solution for the equation* $x - 10y = -5$.

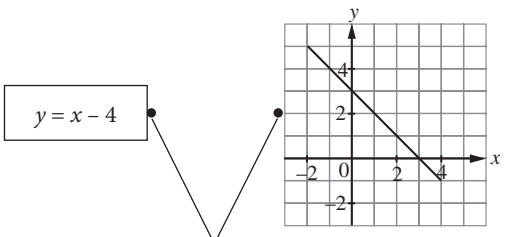
(d) $-2x + 3y = -4$
Apabila/*When* $x = -3$, $y = -3$,
$-2x + 3y = 2(-3) + 3(-3)$
$= -6 - 9$
$= -15$
$\neq -4$
$x = -3$, $y = -3$ bukan penyelesaian bagi persamaan $-2x + 3y = -4$.
$x = -3$, $y = -3$ *is not a solution for the equation* $-2x + 3y = -4$.
Apabila/*When* $x = -1$, $y = -2$,
$-2x + 3y = 2(-1) + 3(-2)$
$= 2 - 6$
$= -4$
$x = -1$, $y = -2$ ialah penyelesaian bagi persamaan $-2x + 3y = -4$.
$x = -1$, $y = -2$ *is a solution for the equation* $-2x + 3y = -4$.

16 (a)

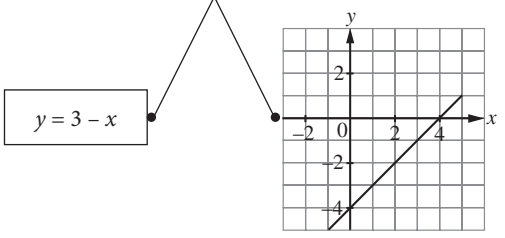


(b)

(c)



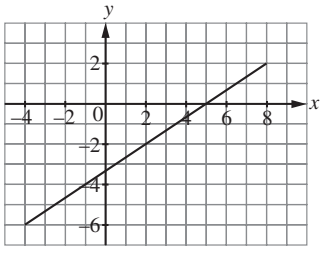
(d)



17 (a)

x	–4	2	8
y	–6	–2	2

(b)



18 $2x + y = 12$ ..... ①

$x + 3y + 1 = 12$

$x + 3y = 11$ .....②

$2x + y = x + 3y + 1$

$x - 2y = 1$ .....③

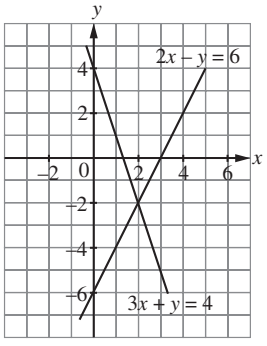
Jawapan/*Answer*: **A**

19 (a) II, Penyelesaian unik
Unique solution

(b) III, Tiada penyelesaian
No solution

(c) I, Penyelesaian tak terhingga
Infinite solutions

20 (a)

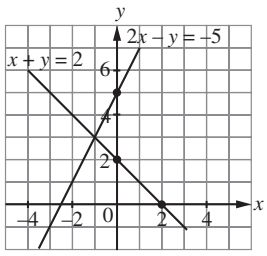


(b) (i) Dua garis lurus itu bersilang.
The two straight lines intersect.

(ii) Persamaan linear serentak $2x - y = 6$ dan $3x + y = 4$ mempunyai penyelesaian unik.
The simultaneous linear equations $2x - y = 6$ *and* $3x + y = 4$ *have unique solution.*

(c) $x = 2, y = -2$

21 (a)



$x = -1, y = 3$

(b) (i) $x + y = 2$ ——— ①

$2x - y = -5$ —— ②

Daripada/*From* ①,

$y = 2 - x$ ——— ③

Gantikan/*Substitute* ③ ke dalam/*into* ②,

$2x - (2 - x) = -5$

$2x - 2 + x = -5$

$2x + x = -5 + 2$

$3x = -3$

$x = -1$

Gantikan/*Substitute* $x = -1$ ke dalam/*into* ①,

$-1 + y = 2$

$y = 3$

(ii) ① + ②,

$x + 2x = 2 + (-5)$

$3x = -3$

$x = -1$

Gantikan/*Substitute* $x = -1$ ke dalam/*into* ①,

$-1 + y = 2$

$y = 3$

22 (a) $x + y = 5$ ..... ①

$x - y = -3$ ..... ②

① + ②: $2x = 2$

$x = 1$

Daripada/*From* ①, $1 + y = 5$

$y = 4$

$\therefore x = 1, y = 4$

(b) $2x - y = 7$ ..... ①

$x + y = 8$ ..... ②

① + ②: $3x = 15$

$x = 5$

Daripada/*From* ②, $5 + y = 8$

$y = 3$

$\therefore x = 5, y = 3$

(c) $x + 3y = 16$ ..... ①

$4x + y = -2$ ..... ②

② × 3: $12x + 3y = -6$ ..... ③

③ – ①: $11x = -22$

$x = -2$

Daripada/*From* ②, $4(-2) + y = -2$
$-8 + y = -2$
$y = 6$
$\therefore x = -2, y = 6$

(d) $3x - 7y = 5$ …… ①
$5x - 2y = -11$ …… ②
① × 2: $6x - 14y = 10$ ……... ③
② × 7: $35x - 14y = -77$ ……... ④
④ – ③: $29x = -87$
$x = -3$
Daripada/*From* ②, $5(-3) - 2y = -11$
$-15 - 2y = -11$
$-2y = 4$
$y = -2$
$\therefore x = -3, y = -2$

23 (a) $x = 14 + y$
$x + y = 154$

(b) $x - y = 14$ ……... ①
$x + y = 154$ …… ②
① + ②, $2x = 168$
$x = 84$
Daripada/*From* ①, $84 - y = 14$
$y = 70$
$\therefore x = 84, y = 70$

24 (a) $a + b = 72$
$a = 2b$

(b) $a + b = 72$ ……..①
$a - 2b = 0$ ……②
① – ②: $3b = 72$
$b = 24$
Daripada/*From* ①, $a + 24 = 72$
$a = 48$
$\therefore a = 48, b = 24$

25 (a) $x + 4y = 12$ …… ①
$3x + 7y = 26$ …… ②

(b) ① × 3: $3x + 12y = 36$ ……... ③
③ – ②: $5y = 10$
$y = 2$
Daripada/*From* ①, $x + 4(2) = 12$
$x + 8 = 12$
$x = 4$
$\therefore x = 4, y = 2$

Praktis Sumatif

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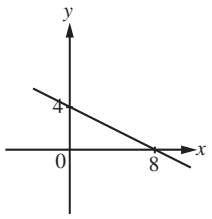
D Persamaan linear dalam satu pemboleh ubah.
A linear equation in one variable.
Jawapan/*Answer*: **B**

2 $p - 5 = 15 - 4p$
$p + 4p = 15 + 5$
$5p = 20$
$p = 4$
Jawapan/*Answer*: **C**

3 $(x + 9) + (2x - 3) + 7 = 34$
$3x + 13 = 34$
$3x = 21$
$x = 7$
Jawapan/*Answer*: **B**

4 $x + 2y = 8$
Apabila/*When* $x = 0$, $y = 4$
Apabila/*When* $y = 0$, $x = 8$



Jawapan/*Answer*: **B**

5 Apabila/*When* $x = -9$, $y = 10$,
$2x + 3y = 2(-9) + 3(10)$
$= -18 + 30$
$= 12$
$x = -9$, $y = 10$ ialah suatu penyelesaian yang mungkin.
$x = -9$, $y = 10$ *is a possible solution.*
Apabila/*When* $x = 3$, $y = 2$,
$2x + 3y = 2(3) + 3(2)$
$= 6 + 6$
$= 12$
$x = 3$, $y = 2$ ialah suatu penyelesaian yang mungkin.
$x = 3$, $y = 2$ *is a possible solution.*
Apabila/*When* $x = -6$, $y = 8$,
$2x + 3y = 2(-6) + 3(8)$
$= -12 + 24$
$= 12$
$x = -6$, $y = 8$ ialah suatu penyelesaian yang mungkin.
$x = -6$, $y = 8$ *is a possible solution.*
Apabila/*When* $x = -4$, $y = 6$,
$2x + 3y = 2(-4) + 3(6)$
$= -8 + 18$
$= 10$
$\neq 12$
$x = -4$, $y = 6$ bukan suatu penyelesaian yang mungkin.
$x = -4$, $y = 6$ *is not a possible solution.*
Jawapan/*Answer*: **D**

6 (a) $75 = k + 12$
(b) Tinggi Anas adalah dua kali tinggi Dahlia
The height of Anas is twice the height of Dahlia

7 $\frac{2x - 5}{3} = \frac{19 - x}{4}$
$4(2x - 5) = 3(19 - x)$
$8x - 20 = 57 - 3x$
$8x + 3x = 57 + 20$
$11x = 77$
$x = 7$

8 (a) $2 + 0.5(t - 1) = 9$

(b) $2 + 0.5t - 0.5 = 9$

$0.5t = 7.5$

$t = 15$

9 (a) $5m + 20n = 825$

$m + 4n = 165$

(b) $m = 165 - 4n$

$30 < m < 40$

$30 < 165 - 4n < 40$

$165 - 40 < 4n < 165 - 30$

$125 < 4n < 135$

$31.25 < n < 33.75$

$n = 32$ atau/*or* $n = 33$

Apabila/*When* $n = 32$, $m = 165 - 4(32)$

$= 37$

Apabila/*When* $n = 33$, $m = 165 - 4(33)$

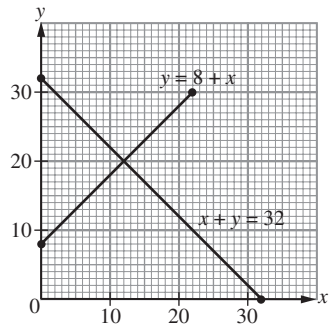
$= 33$

$\therefore m = 33, n = 33$ atau/*or* $m = 37, n = 32$

10 (a) $x + y = 32$

$y = 8 + x$

(b)



(c) $x = 12, y = 20$

11 $x + 2y = 8$ ..... ①

$3x - 7y = 11$ ..... ②

Daripada/*From* ①, $x = 8 - 2y$

Daripada/*From* ②,

$3(8 - 2y) - 7y = 11$

$24 - 6y - 7y = 11$

$24 - 13y = 11$

$-13y = -13$

$y = 1$

$x = 8 - 2(1)$

$= 6$

$\therefore x = 6, y = 1$

12 $4m - 9n = 59$ ..... ①

$2m - 3n = 25$ ..... ②

② × 3: $6m - 9n = 75$ .....③

③ – ①: $2m = 16$

$m = 8$

Daripada/*From* ②, $2(8) - 3n = 25$

$16 - 3n = 25$

$-3n = 9$

$n = -3$

$\therefore m = 8, n = -3$

13 (a) $x = 30 + y$

$x - y = 30$

$x + 7 = 3(y + 7)$

$x + 7 = 3y + 21$

$x - 3y = 14$

(b) $x - y = 30$ ..... ①

$x - 3y = 14$..... ②

① – ②, $2y = 16$

$y = 8$

Daripada/*From* ①, $x - 8 = 30$

$x = 38$

Rahman: 38 tahun/*years old*

Zainal: 8 tahun/*years old*

14 (a) (0, –9), (1, –6), (4, 3)

(b)