Jawapan

Praktis 9

Praktis Formatif

1 **A** Betul/*Correct*
B Salah/*Wrong*
C Betul/*Correct*
D Betul/*Correct*
Jawapan/*Answer*: **B**

2 (a) (i) Kecerunan AB / *Gradient of AB* $= \dfrac{5-(-1)}{1-(-2)}$

$= 2$

(ii) Pintasan-y garis lurus = 3
y-intercept of the straight line = 3

(b) (i) Kecerunan garis lurus ialah pekali x bagi $y = 2x + 3$.
The gradient of the straight line is the coefficient of x of $y = 2x + 3$. ✓

(ii) Pintasan-y garis lurus ialah sebutan pemalar bagi $y = 2x + 3$.
The y-intercept of the straight line is the constant term of $y = 2x + 3$. ✓

(c) Persamaan garis lurus / *Equation of straight line* $y = mx + c$ / $y = mx + c$
Kecerunan / *Gradient*: m
Pintasan-y / *y-intercept*: c

3

Persamaan garis lurus *Equation of straight line*	Kecerunan *Gradient*	Pintasan-y *y-intercept*
(a) $y = 4x + 7$	4	7
(b) $y = -2x + 10$	−2	10
(c) $y = -x$	−1	0
(d) $y = 6$	0	6

4 (a) $-4y = -5x + 8$

$y = \dfrac{-5x+8}{-4}$

$y = \dfrac{5}{4}x - 2$

(b) $\dfrac{y}{3} = -\dfrac{x}{10} + 1$

$y = -\dfrac{3}{10}x + 3$

(c) $\dfrac{7}{3}x - y = 7$

$\dfrac{\frac{7}{3}x - y}{7} = 1$

$\dfrac{x}{3} - \dfrac{y}{7} = 1$

5 (a) $4x - y = 8$

$y = 4x - 8$ [✓]

(b) $-4x + y = 8$

$y = 4x + 8$

(c) $-\dfrac{x}{2} + \dfrac{y}{8} = 1$

$-4x + y = 8$

$y = 4x + 8$

(d) $\dfrac{x}{2} - \dfrac{y}{8} = 1$

$4x - y = 8$

$y = 4x - 8$ [✓]

6

Garis lurus *Straight line*	Bentuk $y = mx + c$ *Form* $y = mx + c$	Kecerunan *Gradient*	Pintasan-y *y-intercept*
(a) $-2x + 3y = 9$	$y = \dfrac{2}{3}x + 3$	$\dfrac{2}{3}$	3
(b) $\dfrac{x}{4} + \dfrac{y}{6} = 1$	$y = -\dfrac{3}{2}x + 6$	$-\dfrac{3}{2}$	6

7 (a) $x = 2, y = 5$

$4x - 3 = 4 \times 2 - 3$

$= 5$

$y = 4x - 3$

Titik A yang terletak pada garis lurus $y = 4x - 3$ memenuhi persamaan garis lurus $y = 4x - 3$.
Point A that lies on the straight line $y = 4x - 3$ *satisfies the equation of the straight line* $y = 4x - 3$.

(b) $x = -1, y = -3$

$4x - 3 = 4 \times (-1) - 3$

$= -7$

$y \neq 4x - 3$

Titik B yang tidak terletak pada garis lurus $y = 4x - 3$ tidak memenuhi persamaan garis lurus $y = 4x - 3$.
Point B that does not lie on the straight line $y = 4x - 3$ *does not satisfy the equation of the straight line* $y = 4x - 3$.

8 $x + 2y = 6$

(0, 2): $x + 2y = 0 + 2(2)$
$= 4$
$\neq 6$
$\therefore$ (0, 2) tidak terletak pada garis lurus.
$\therefore$ (0, 2) *does not lie on the straight line.*

(4, 1): $x + 2y = 4 + 2(1)$
$= 6$
$\therefore$ (4, 1) terletak pada garis lurus.
$\therefore$ (4, 1) *lies on the straight line.*

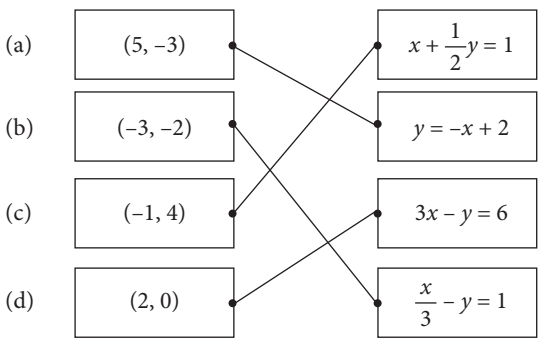
(−2, 4): $x + 2y = -2 + 2(4)$
$= 6$
$\therefore$ (−2, 4) terletak pada garis lurus.
$\therefore$ (−2, 4) *lies on the straight line.*

(2, 4): $x + 2y = 2 + 2(4)$
$= 10$
$\neq 6$
$\therefore$ (2, 4) tidak terletak pada garis lurus.
$\therefore$ (2, 4) *does not lie on the straight line.*

(12, −3): $x + 2y = 12 + 2(-3)$
$= 6$
$\therefore$ (−12, −3) terletak pada garis lurus.
$\therefore$ (12, −3) *lies on the straight line.*

(−3, 9): $x + 2y = -3 + 2(9)$
$= 15$
$\neq 6$
$\therefore$ (−3, 9) tidak terletak pada garis lurus.
$\therefore$ (−3, 9) *does not lie on the straight line.*

9



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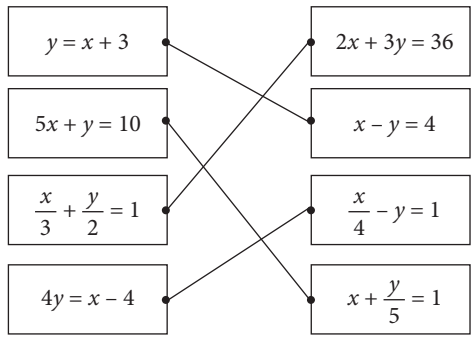
(a)

Garis lurus *Straight line*	Kecerunan *Gradient*
AB	$\frac{1}{2}$
CD	$\frac{1}{2}$
EF	$\frac{1}{2}$

(b) Kecerunan garis-garis selari adalah sama.
The gradients of parallel straight lines are equal.

11



12 (a) $y = 5$ (c) $y = -3$
(b) $x = 4$ (d) $x = -3$

13 (a) Persamaan garis lurus ialah $y = 1$. ✓
The equation of straight line is $y = 1$.

(b) Persamaan garis lurus ialah $x = 7$. ✓
The equation of straight line is $x = 7$.

(c) Persamaan garis lurus ialah $y = 2x + 6$. ✗
The equation of straight line is $y = 2x + 6$.

(d) $y = -3x + c$
Gantikan/*Substitute* $x = 1$, $y = 0$,
$0 = -3(1) + c$
$c = 3$
Persamaan garis lurus ialah $y = -3x + 3$. ✗
The equation of straight line is $y = -3x + 3$.

14 (a) $y = 4x + c$
Gantikan/*Substitute* $x = 3$, $y = 4$,
$4 = 4(3) + c$
$4 = 12 + c$
$c = -8$
Persamaan garis lurus ialah $y = 4x - 8$.
The equation of straight line is $y = 4x - 8$.

(b) $y = -x + c$
Gantikan/*Substitute* $x = -1$, $y = 3$,
$3 = -(-1) + c$
$3 = 1 + c$
$c = 2$
Persamaan garis lurus ialah $y = -x + 2$.
The equation of straight line is $y = -x + 2$.

15 (a) $y = \frac{1}{2}x + c$
Gantikan/*Substitute* $x = 4$, $y = 0$,
$0 = \frac{1}{2}(4) + c$
$0 = 2 + c$
$c = -2$
Persamaan garis lurus k ialah $y = \frac{1}{2}x - 2$.
The equation of the straight line k *is* $y = \frac{1}{2}x - 2$.

(b) $y = -2x + c$
Gantikan/*Substitute* $x = -1$, $y = 7$,
$7 = -2(-1) + c$

$7 = 2 + c$

$c = 5$

Persamaan garis lurus k ialah $y = -2x + 5$.

The equation of the straight line k is $y = -2x + 5$.

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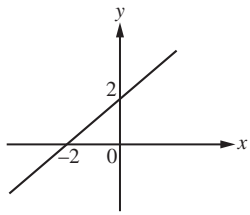
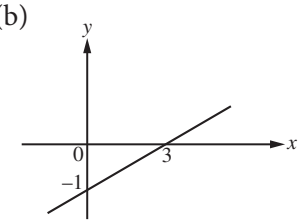
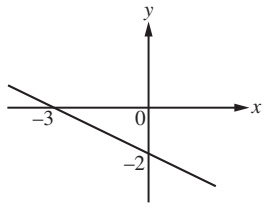
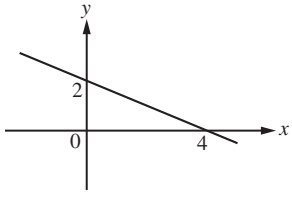
Garis lurus *Straight line*	**Pintasan-x** *x-intercept*	**Pintasan-y** *y-intercept*	**Persamaan garis lurus dalam bentuk** $\frac{x}{a} + \frac{y}{b} = 1$ *Equation of straight line in the form* $\frac{x}{a} + \frac{y}{b} = 1$
(a) 	−2	2	$-\frac{x}{2} + \frac{y}{2} = 1$
(b) 	3	−1	$\frac{x}{3} - y = 1$
(c) 	−3	−2	$-\frac{x}{3} - \frac{y}{2} = 1$
(d) 	4	2	$\frac{x}{4} + \frac{y}{2} = 1$

17 (a) $m = \frac{-6 - 2}{-1 - 3}$

$= \frac{-8}{-4}$

$= 2$

(b) (i) $2 = 2 \times 3 + c$

$2 = 6 + c$

$c = -4$

(ii) $-6 = 2 \times (-1) + c$

$-6 = -2 + c$

$c = -4$

18 (a) $m = \frac{1 + 3}{9 - 5}$

$= \frac{4}{4}$

$= 1$

$y = x + c$

Gantikan/*Substitute* $x = 9$, $y = 1$,

$1 = 9 + c$

$c = -8$

Persamaan garis lurus itu ialah $y = x - 8$.

The equation of the straight line is $y = x - 8$.

(b) $m = \dfrac{8+7}{1+2}$

$= \dfrac{15}{3}$

$= 5$

$y = 5x + c$

Gantikan/*Substitute* $x = 1$, $y = 8$,

$8 = 5(1) + c$

$8 = 5 + c$

$c = 3$

Persamaan garis lurus itu ialah $y = 5x + 3$.

The equation of the straight line is $y = 5x + 3$.

(c) $m = \dfrac{11+4}{-2-3}$

$= \dfrac{15}{-5}$

$= -3$

$y = -3x + c$

Gantikan/*Substitute* $x = -2$, $y = 11$,

$11 = -3(-2) + c$

$11 = 6 + c$

$c = 5$

Persamaan garis lurus itu ialah $y = -3x + 5$.

The equation of the straight line is $y = -3x + 5$.

(d) $m = \dfrac{-1+3}{-4-4}$

$= \dfrac{2}{-8}$

$= -\dfrac{1}{4}$

$y = -\dfrac{1}{4}x + c$

Gantikan/*Substitute* $x = -4$, $y = -1$,

$-1 - = -\dfrac{1}{4}(-4) + c$

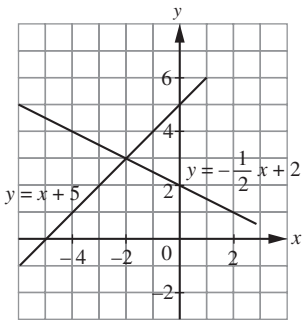
$-1 = 1 + c$

$c = -2$

Persamaan garis lurus itu ialah $y = -\dfrac{1}{4}x - 2$.

The equation of the straight line is $y = -\dfrac{1}{4}x - 2$.

19 (a)



(b) Koordinat titik persilangan ialah (−2, 3).

The coordinates of the point of intersection are (−2, 3).

20 (a) $y = 4x - 5$ … ①

$y = 3$ … ②

Gantikan ② ke dalam ①,

Substitute ② *into* ①,

$3 = 4x - 5$

$4x = 8$

$x = 2$

∴ Titik persilangan: (2, 3)

∴ *Point of intersection*: (2, 3)

(b) $3x - 2y = 1$ … ①

$y = -5x - 7$ … ②

Gantikan ② ke dalam ①,

Substitute ② *into* ①,

$3x - 2(-5x - 7) = 1$

$3x + 10x + 14 = 1$

$13x = -13$

$x = -1$

Daripada/*From* ②, $y = -5(-1) - 7$

$= 5 - 7$

$= -2$

∴ Titik persilangan: (−1, −2)

∴ *Point of intersection*: (−1, −2)

(c) $y = x - 7$ … ①

$x - \dfrac{y}{4} = 4$ … ②

② × 4, $4x - y = 16$ … ③

① + ③, $4x = x + 9$

$3x = 9$

$x = 3$

Daripada/*From* ①, $y = 3 - 7$

$= -4$

∴ Titik persilangan: (3, −4)

∴ *Point of intersection*: (3, −4)

(d) $2x + y = 1$ … ①

$-\dfrac{x}{12} + \dfrac{y}{6} = 1$ … ②

② × 24, $-2x + 4y = 24$ … ③

① + ③, $y + 4y = 1 + 24$

$5y = 25$

$y = 5$

Daripada/*From* ①, $2x + 5 = 1$

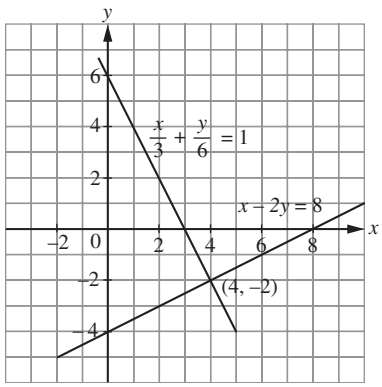
$2x = -4$

$x = -2$

∴ Titik persilangan: (−2, 5)

∴ *Point of intersection:* (−2, 5)

21 (a)



Titik persilangan: (4, –2)
Point of intersection: (4, –2)

(b) $x - 2y = 8$ … ①

$\frac{x}{3} + \frac{y}{6} = 1$ … ②

② × 6, $2x + y = 6$

$y = 6 - 2x$ … ③

Gantikan ③ ke dalam ①,
Substitute ③ *into* ①,

$x - 2(6 - 2x) = 8$

$x - 12 + 4x = 8$

$5x = 20$

$x = 4$

Daripada/*From* ③, $y = 6 - 2(4)$

$= -2$

Titik persilangan: (4, –2)
Point of intersection: (4, –2)

(c) $x - 2y = 8$ … ①

$\frac{x}{3} + \frac{y}{6} = 1$ … ②

② × 12, $4x + 2y = 12$ … ③

① + ③, $x + 4x = 8 + 12$

$5x = 20$

$x = 4$

Daripada/*From* ①, $4 - 2y = 8$

$-2y = 4$

$y = -2$

Titik persilangan: (4, –2)
Point of intersection: (4, –2)

22 (a) Pintasan-y bagi garis lurus BC ialah 4.
The y-intercept of the straight line BC is 4.
$\therefore B(0, 4)$
$4x + y = k$
Gantikan/*Substitute* $x = 0$, $y = 4$,
$4(0) + 4 = k$
$k = 4$

(b) Garis lurus AD adalah selari dengan paksi-x.
$\therefore$ Persamaan bagi garis lurus AD ialah $y = -2$.
The straight line AD is parallel to the x-axis.
$\therefore$ *The equation of the straight line AD is* $y = -2$.

(c) Kecerunan CD = Kecerunan AB

Gradient CD = *Gradient AB*

$= -4$

$y = -4x + c$

Gantikan/*Substitute* $x = 6$, $y = -2$,

$-2 = -4(6) + c$

$-2 = -24 + c$

$c = 22$

Persamaan garis lurus CD ialah $y = -4x + 22$.
The equation of the straight line CD is $y = -4x + 22$.

(d) $4x + y = 4$ … ①

$y = -2$ … ②

Gantikan ② ke dalam ①,
Substitute ② *into* ①,

$4x - 2 = 4$

$4x = 6$

$x = \frac{3}{2}$

Koordinat titik A ialah $\left(\frac{3}{2}, -2\right)$.

The coordinates of point A are $\left(\frac{3}{2}, -2\right)$.

Praktis Sumatif

1 A $3y = x + 12$

Apabila/*When* $x = 0$,

$3y = 12$

$y = 4$

Pintasan-y = 4
The y-intercept = 4

B $\frac{1}{2}y = 2x - 3$

Apabila/*When* $x = 0$,

$\frac{1}{2}y = -3$

$y = -6$

Pintasan-y = –6
The y-intercept = –6

C $-\frac{x}{6} + \frac{y}{3} = 1$

Apabila/*When* $x = 0$,

$\frac{y}{3} = 1$

$y = 3$

Pintasan-y = 3
The y-intercept = 3

D $5x - 3y = 9$

Apabila/*When* $x = 0$,

$-3y = 9$

$y = -3$

Pintasan-y = –3
The y-intercept = –3

Jawapan/*Answer*: **C**

2 $3y = kx + 5$

$y = \frac{k}{3}x + \frac{5}{3}$

Kecerunan/*Gradient* $= \frac{k}{3}$

$x + y = 10$

$y = -x + 10$

Kecerunan/*Gradient* $= -1$

$\frac{k}{3} = \frac{1}{2} \times (-1)$

$k = -\frac{3}{2}$

Jawapan/*Answer*: **B**

3 Kecerunan/*Gradient*,

$m = -\frac{8}{(-4)}$

$= 2$

Pintasan-*y*/*y-intercept*,

$c = 8$

Persamaan bagi garis lurus itu ialah $y = 2x + 8$.

The equation of the straight line is $y = 2x + 8$.

Jawapan/*Answer*: **A**

4 $\frac{k-5}{-8-2} = \frac{4}{5}$

$\frac{k-5}{-10} = \frac{4}{5}$

$k - 5 = -8$

$k = -3$

Jawapan/*Answer*: **B**

5 $px + qy = 6$

Gantikan/*Substitute* $x = 1$, $y = -3$,

$p(1) + q(-3) = 6$

$p - 3q = 6 \ldots ①$

Gantikan/*Substitute* $x = -2$, $y = -12$,

$p(-2) + q(-12) = 6$

$-2p - 12q = 6$

$-p - 6q = 3 \ldots ②$

① + ②, $-3q - 6q = 9$

$-9q = 9$

$q = -1$

Daripada/*From* ①, $p - 3(-1) = 6$

$p + 3 = 6$

$p = 3$

Kaedah alternatif

Alternative method

Kecerunan/*Gradient*, $m = \frac{-12 + 3}{-2 - 1}$

$= \frac{-9}{-3}$

$= 3$

$y = 3x + c$

Gantikan/*Substitute* $x = 1$, $y = -3$,

$-3 = 3(1) + c$

$-3 = 3 + c$

$c = -6$

Persamaan bagi garis lurus itu ialah $y = 3x - 6$ atau $3x - y = 6$.

The equation of the straight line is $y = 3x - 6$ *or* $3x - y = 6$.

$\therefore p = 3, q = -1$

Jawapan/*Answer*: **D**

6 $qy = (2p + 5)x + 9$

(a) Garis lurus yang selari dengan paksi-*x* mempunyai persamaan yang berbentuk $y = k$.

Straight line that is parallel to the x-axis has equation of the form $y = k$.

$2p + 5 = 0$ dan/*and* $q \neq 0$

$2p = -5$

$p = -\frac{5}{2}$

$\therefore q \neq 0, p = -\frac{5}{2}$

(b) Garis lurus yang selari dengan paksi-*y* mempunyai persamaan yang berbentuk $x = h$.

Straight line that is parallel to the y-axis has equation of the form $x = h$.

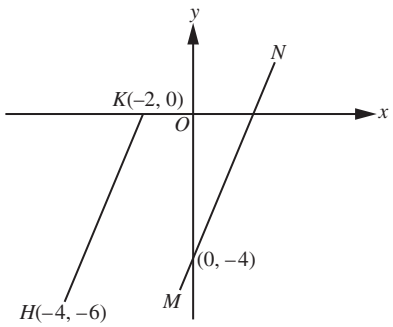
$q = 0$ dan/*and* $2p + 5 \neq 0$

$2p \neq -5$

$p \neq -\frac{5}{2}$

$\therefore p \neq -\frac{5}{2}, q = 0$

7



Kecerunan *MN* = Kecerunan *HK*

Gradient MN = Gradient HK

$$= \frac{0+6}{-2+4}$$
$$= \frac{6}{2}$$
$$= 3$$
$$m = 3$$

Pintasan-*y*/*y-intercept*, $c = -4$

Persamaan bagi garis lurus *MN* ialah $y = 3x - 4$.

The equation of the straight line MN is $y = 3x - 4$.

8 (a) (i) $\frac{x}{2} + \frac{y}{(-4)} = 1$

$$\frac{x}{2} - \frac{y}{4} = 1$$

(ii) Kecerunan garis lurus *l*

Gradient of the straight line l

$$m = -\frac{-4}{2}$$
$$= 2$$
$$y = 2x + c$$

Gantikan/*Substitute* $x = -3$, $y = 0$,

$0 = 2(-3) + c$

$0 = -6 + c$

$c = 6$

Persamaan garis lurus *l* ialah $y = 2x + 6$ atau $2x - y = -6$.

The equation of the straight line l is $y = 2x + 6$ *or* $2x - y = -6$.

(b) Gantikan/*Substitute* $x = 4$, $y = 14$,

Garis lurus *k*/*Straight line k*:

$$\frac{x}{2} - \frac{y}{4} = \frac{4}{2} - \frac{14}{4}$$
$$= 2 - \frac{7}{2}$$
$$= -\frac{3}{2}$$
$$\neq 1$$

∴ Garis lurus *k* tidak melalui titik (4, 14).

∴ *Straight line k does not pass through point* (4, 14).

Garis lurus *l*/*Straight line l*:

$2x - y = 2(4) - 14$

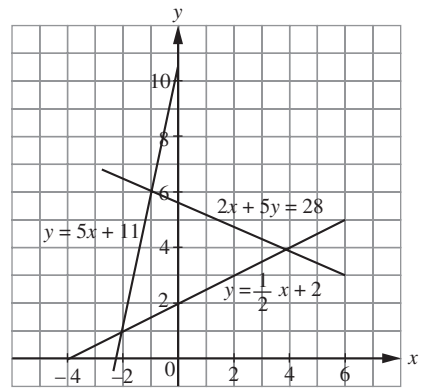
$= 8 - 14$

$= -6$

∴ Garis lurus *l* melalui titik (4, 14).

∴ *Straight line l passes through point* (4, 14).

9 (a)



Titik-titik persilangan garis-garis lurus itu ialah (–2, 1), (4, 4) dan (–1, 6).

The points of intersection of the straight lines are (–2, 1), (4, 4) *and* (–1, 6).

(b) $y = 5x + 11 \ldots ①$

$2x + 5y = 28 \ldots ②$

Gantikan $y = 5x + 11$ ke dalam ②,

Substitute $y = 5x + 11$ *into* ②,

$2x + 5(5x + 11) = 28$

$2x + 25x + 55 = 28$

$27x = 28$

$x = -1$

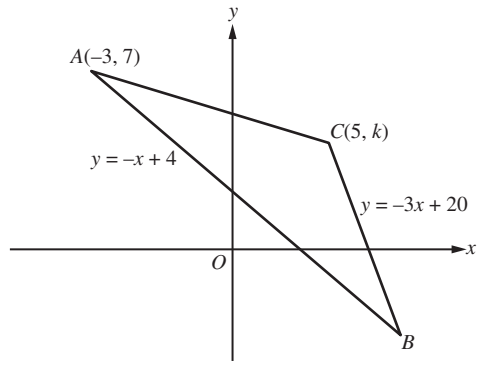
Daripada / *From* ①, $y = 5(-1) + 11$

$= 6$

Titik persilangan (–1, 6) bagi garis-garis lurus $y = 5x + 11$ dan $2x + 5y = 28$ adalah sama dengan kaedah bergraf.

The point of intersection (–1, 6) *of the straight lines* $y = 5x + 11$ *and* $2x + 5y = 28$ *is the same as the graphical method.*

10



(a) $y = -3x + 20$

Gantikan/*Substitute* $x = 5$, $y = k$,

$k = -3(5) + 20$

$= -15 + 20$

$= 5$

(b) $y = -3x + 20$ … ①

$x + y = 4$ … ②

Gantikan ① ke dalam ②,

Substitute ① into ②,

$x + (-3x + 20) = 4$

$-2x + 20 = 4$

$-2x = -16$

$x = 8$

Daripada/*From* ①, $y = -3(8) + 20$

$= -24 + 20$

$= -4$

Koordinat bagi B ialah $(8, -4)$.

The coordinates of B are $(8, -4)$.

(c) Katakan garis lurus AC memotong paksi-x pada titik $E(a, 0)$.

Let the straight line AC cuts the x-axis at point $E(a, 0)$.

Kecerunan AE = Kecerunan AC

Gradient AE = Gradient AC

$$\frac{7 - 0}{-3 - a} = \frac{7 - 5}{-3 - 5}$$

$$\frac{7}{-3 - a} = \frac{2}{-8}$$

$-28 = -3 - a$

$-25 = -a$

$a = 25$

Pintasan-x bagi garis lurus AC ialah 25.

The x-intercept of the straight line AC is 25.

11 (a) RS adalah selari dengan paksi-y.

RS is parallel to the y-axis.

Koordinat-x titik S = Koordinat-x titik R

x-coordinate of point S = x-coordinate of point R

$a = -4$

(b) (i) Persamaan bagi garis lurus PQ ialah $y = -3$.

The equation of the straight line PQ is $y = -3$.

(ii) Persamaan bagi garis lurus RS ialah $x = -4$.

The equation of the straight line RS is $x = -4$.

(c) (i) Kecerunan PS/*Gradient PS*

$$= \frac{1 + 3}{-4 - 2}$$

$$= -\frac{4}{6}$$

$$= -\frac{2}{3}$$

$$y = -\frac{2}{3}x + c$$

Gantikan/*Substitute* $x = 2$, $y = -3$,

$$-3 = -\frac{2}{3}(2) + c$$

$$-3 = -\frac{4}{3} + c$$

$$c = -3 + \frac{4}{3}$$

$$= -\frac{5}{3}$$

$$y = -\frac{2}{3}x - \frac{5}{3}$$

$3y = -2x - 5$

$2x + 3y = -5$

Persamaan bagi garis lurus PS ialah $2x + 3y = -5$.

The equation of the straight line PS is $2x + 3y = -5$.

(ii) Kecerunan QR/*Gradient QR*

$$= -\frac{2}{3}$$

$$y = -\frac{2}{3}x + c$$

Gantikan/*Substitute* $x = -4$, $y = 3$,

$$3 = -\frac{2}{3}(-4) + c$$

$$3 = \frac{8}{3} + c$$

$$c = 3 - \frac{8}{3}$$

$$= \frac{1}{3}$$

$$y = -\frac{2}{3}x + \frac{1}{3}$$

$3y = -2x + 1$

$2x + 3y = 1$

Persamaan bagi garis lurus QR ialah $2x + 3y = 1$.

The equation of the straight line QR is $2x + 3y = 1$.

12 (a) $OQ = 2$ unit/*units*

$\therefore Q(0, -2)$

Persamaan bagi garis lurus QR ialah $y = -2$.

The equation of the straight line QR is $y = -2$.

(b) Kecerunan PQ/*Gradient PQ*

$$= \frac{3 + 2}{-2 - 0}$$

$$= -\frac{5}{2}$$

$$y = -\frac{5}{2}x - c$$

Gantikan/*Substitute* $x = -2$, $y = 3$,

$$3 = -\frac{5}{2}(-2) + c$$

$3 = 5 + c$

$c = -2$

Persamaan bagi garis lurus PQ ialah $y = -\frac{5}{2}x - 2$.

The equation of the straight line PQ is $y = -\frac{5}{2}x - 2$.

(c) QR adalah selari dengan paksi-x.

QR is parallel to the x-axis.

$QR = 5$ unit/*units*

$\therefore R(5, -2)$

$$y = -\frac{5}{2}x + c$$

Gantikan/*Substitute* $x = 5$, $y = -2$,

$$-2 = -\frac{5}{2}(5) + c$$
$$-2 = -\frac{25}{2} + c$$
$$c = \frac{21}{5}$$
$$y = -\frac{5}{2}x + \frac{21}{2}$$

Apabila/*When* $y = 0$,

$$-\frac{5}{2}x + \frac{21}{2} = 0$$
$$\frac{5}{2}x = \frac{21}{2}$$
$$x = \frac{21}{5}$$

Pintasan-x bagi garis lurus RS ialah $\frac{21}{5}$.

The x-intercept of the straight line RS is $\frac{21}{5}$.

Kaedah alternatif/*Alternative method*

Katakan garis lurus RS memotong paksi-x pada titik $T(a, 0)$.

Let the straight line RS cuts the x-axis at point $T(a, 0)$.

Kecerunan RT = Kecerunan RS

Gradient RT = Gradient RS

$$\frac{0+2}{a-5} = -\frac{5}{2}$$
$$4 = -5(a-5)$$
$$4 = -5a + 25$$
$$5a = 21$$
$$a = \frac{21}{5}$$

Pintasan-x bagi garis lurus RS ialah $\frac{21}{5}$.

The x-intercept of the straight line RS is $\frac{21}{5}$.

(d) (i) $y = \frac{5}{3}x + c$

Gantikan/*Substitute* $x = 5$, $y = -2$,

$$-2 = \frac{5}{3}(5) + c$$
$$-2 = \frac{25}{3} + c$$
$$c = -\frac{31}{3}$$
$$y = \frac{5}{3}x - \frac{31}{3}$$
$$3y = 5x - 31$$
$$5x - 3y = 31$$

Persamaan bagi garis lurus itu ialah $5x - 3y = 31$.

The equation of the straight line is $5x - 3y = 31$.

(ii) $5x - 3y = 31 \ldots ①$

$$y = -\frac{5}{2}x - 2$$
$$2y = -5x - 4$$
$$5x + 2y = -4 \ldots ②$$

② − ①, $5y = -35$

$$y = -7$$

Daripada/*From* ①, $5x - 3(-7) = 31$

$$5x + 21 = 31$$
$$5x = 10$$
$$x = 2$$

Titik persilangan bagi dua garis lurus itu ialah $(2, -7)$.

The point of intersection of the two straight lines is $(2, -7)$.