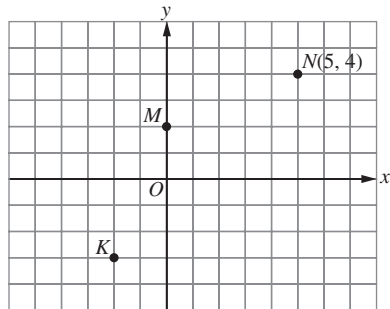


PENYELESAIAN LENGKAP

PRAKTIS 7

Praktis Formatif

1



Koordinat yang mungkin bagi K ialah $(-2, -3)$.
The possible coordinates of K are $(-2, -3)$.

Jawapan/Answer: B

2 (a) 5 (b) 3 (c) 5 (d) 10

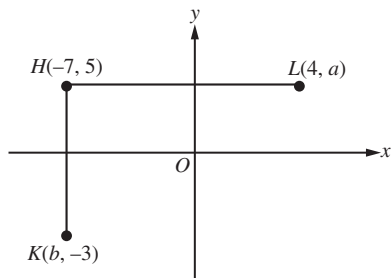
3 (a) $PQ = 10 - 6 = 4$ unit/units

(b) $PQ = 5 - (-2) = 7$ unit/units

(c) $PQ = 7 - (-11) = 18$ unit/units

(d) $PQ = -3 - (-14) = 11$ unit/units

4



A $a = 5$

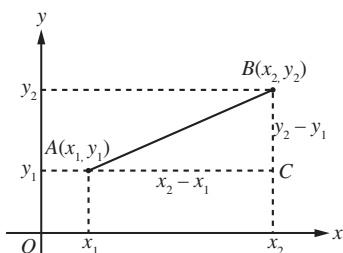
B $b = -7$

C $HL = 4 - (-7) = 4 + 7 = 11$ unit/units

D $HK = 5 - (-3) = 5 + 3 = 8$ unit/units

Jawapan/Answer: C

5 (a)

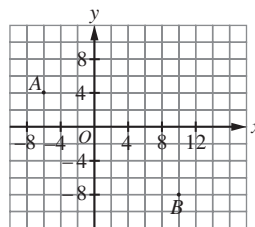


(b) Jarak di antara A dan B/Distance between A and B
 $= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

6 (a) Jarak di antara dua titik
Distance between two points
 $= \sqrt{(-7 + 2)^2 + (2 - 6)^2}$
 $= \sqrt{(-5)^2 + (-4)^2}$
 $= \sqrt{25 + 16}$
 $= \sqrt{41}$
 $= 6.40$ unit/units

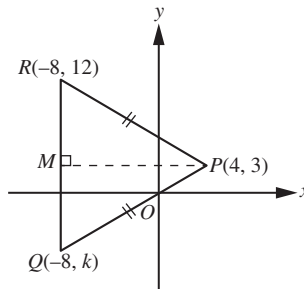
(b) Jarak di antara dua titik
Distance between two points
 $= \sqrt{(10 + 4)^2 + (-8 - 2)^2}$
 $= \sqrt{14^2 + (-10)^2}$
 $= \sqrt{196 + 100}$
 $= \sqrt{296}$
 $= 17.20$ unit/units

7 (a)



(b) Jarak di antara A dan B/Distance between A and B
 $= \sqrt{(-6 - 10)^2 + (4 + 8)^2}$
 $= \sqrt{(-16)^2 + 12^2}$
 $= \sqrt{256 + 144}$
 $= \sqrt{400}$
 $= 20$ unit/units

8



(a) $PR = \sqrt{(4 + 8)^2 + (3 - 12)^2}$
 $= \sqrt{12^2 + (-9)^2}$
 $= \sqrt{144 + 81}$
 $= \sqrt{225}$
 $= 15$ unit/units
 $PQ = 15$ unit/units

- (b) $M(-8, 3)$ ialah titik tengah QR .
 $M(-8, 3)$ is the midpoint of QR .

$$\frac{12 + k}{2} = 3$$

$$12 + k = 6$$

$$k = -6$$

- (c) $QR = 12 - (-6)$
 $= 12 + 6$
 $= 18$ unit/units

- 9 (a) $AB = 4$ unit/units
 $5 - h = 4$
 $h = 1$

CD adalah selari dengan paksi- x .
 CD is parallel to the x -axis.

$$\therefore k = -3$$

- (b) (i) AD
 $= \sqrt{(1 - 6)^2 + (9 + 3)^2}$
 $= \sqrt{(-5)^2 + 12^2}$
 $= \sqrt{25 + 144}$
 $= \sqrt{169}$
 $= 13$ unit/units

- (ii) BC
 $= \sqrt{(5 - 14)^2 + (9 + 3)^2}$
 $= \sqrt{(-9)^2 + 12^2}$
 $= \sqrt{81 + 144}$
 $= \sqrt{225}$
 $= 15$ unit/units

- (c) Perimeter bagi trapezium $ABCD$
Perimeter of trapezium $ABCD$
 $= 4 + 15 + 8 + 13$
 $= 40$ unit/units

10 $\left(\frac{x+8}{2}, \frac{7+1}{2}\right) = (5, y)$

$$\left(\frac{x+8}{2}, 4\right) = (5, y)$$

$$\frac{x+8}{2} = 5$$

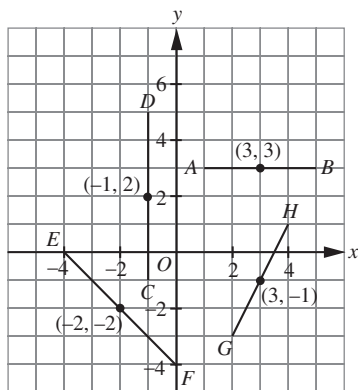
$$x+8 = 10$$

$$x = 2$$

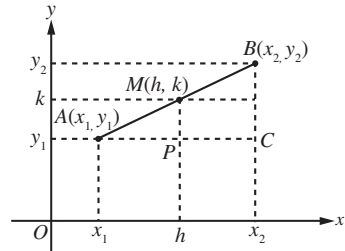
$$y = 4$$

Jawapan/Answer: **B**

11



12 (a)



(b)

$$AP = PC$$

$$h - x_1 = x_2 - h$$

$$2h = x_1 + x_2$$

$$h = \frac{x_1 + x_2}{2}$$

$$CQ = QB$$

$$k - y_1 = y_2 - k$$

$$2k = y_1 + y_2$$

$$k = \frac{y_1 + y_2}{2}$$

- (c) Koordinat bagi titik tengah AB
Coordinates of the midpoint of AB

$$= \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

- 13 (a) Koordinat titik tengah
Coordinates of the midpoint

$$= \left(\frac{3+7}{2}, \frac{0+6}{2}\right)$$

$$= (5, 3)$$

- (b) Koordinat titik tengah
Coordinates of the midpoint

$$= \left(\frac{2-8}{2}, \frac{4-4}{2}\right)$$

$$= (-3, 0)$$

- (c) Koordinat titik tengah
Coordinates of the midpoint

$$= \left(\frac{-1-5}{2}, \frac{9+3}{2}\right)$$

$$= (-3, 6)$$

14 (a) $\frac{x-5}{2} = 6$

$$x - 5 = 12$$

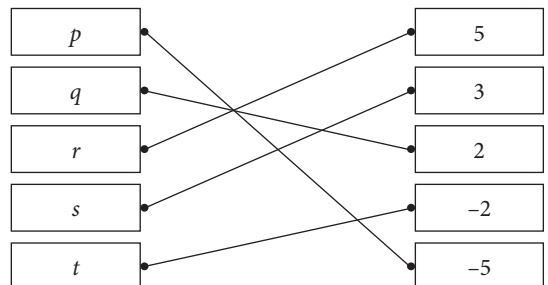
$$x = 17$$

(b) $\frac{y+3}{2} = -1$

$$y + 3 = -2$$

$$y = -5$$

15



- 16 Titik tengah QS = Titik tengah PR

Midpoint of QS = Midpoint of PR

$$\left(\frac{m+0}{2}, \frac{n+4}{2}\right) = \left(\frac{8+4}{2}, \frac{0+12}{2}\right)$$

$$\left(\frac{m}{2}, \frac{n+4}{2}\right) = (6, 6)$$

$$\frac{m}{2} = 6$$

$$m = 12$$

$$\frac{n+4}{2} = 6$$

$$n+4 = 12$$

$$n = 8$$

- 17 $M(-2, 9)$ ialah titik tengah HK.

$M(-2, 9)$ is the midpoint of HK.

$$\frac{-7+r}{2} = -2$$

$$-7+r = -4$$

$$r = 3$$

Jawapan/Answer: A

- 18 (a) $AD = BC$

$$AD = 6 - 3 = 3 \text{ unit/units}$$

Koordinat bagi titik D ialah $(-6, -3)$.

Coordinates of point D are $(-6, -3)$. [✓]

- (b) Koordinat bagi titik tengah AC

Coordinates of the midpoint of AC

$$= \left(\frac{-6+2}{2}, \frac{0+3}{2}\right)$$

$$= \left(-2, \frac{3}{2}\right) \quad [\times]$$

- (c) $AB = \sqrt{(2+6)^2 + (6-0)^2}$

$$= \sqrt{8^2 + 6^2}$$

$$= \sqrt{64 + 36}$$

$$= \sqrt{100}$$

$$= 10 \text{ unit/units}$$

$$\text{Perimeter } ABCD = 2(10 + 3)$$

$$= 2(13)$$

$$= 26 \text{ unit/units} \quad [\checkmark]$$

- 19 (a) $PS = 7 - (-5)$

$$= 7 + 5$$

$$= 12 \text{ unit/units}$$

$$RS^2 = 13^2 - 12^2$$

$$= 169 - 144$$

$$= 25$$

$$RS = 5 \text{ unit/units}$$

Koordinat bagi titik R ialah $(7, 3)$.

The coordinates of point R are $(7, 3)$.

- (b) (i) Koordinat bagi pusat bulatan

= Koordinat bagi titik tengah PR

Coordinates of the centre of circle

= Coordinates of the midpoint of PR

$$= \left(\frac{-5+7}{2}, \frac{-2+3}{2}\right)$$

$$= \left(1, \frac{1}{2}\right)$$

$$(ii) PR = \sqrt{(-5-7)^2 + (-2-3)^2}$$

$$= \sqrt{(-12)^2 + (-5)^2}$$

$$= \sqrt{144 + 25}$$

$$= \sqrt{169}$$

$$= 13 \text{ unit/units}$$

Jejari bagi bulatan/Radius of circle

$$= \frac{1}{2}PR$$

$$= \frac{13}{2}$$

$$= 6\frac{1}{2} \text{ unit/units}$$

- (c) Jarak K dari pusat bulatan

Distance of K from the centre of circle

$$= \sqrt{(3-1)^2 + \left(6-\frac{1}{2}\right)^2}$$

$$= \sqrt{2^2 + \left(\frac{11}{2}\right)^2}$$

$$= \sqrt{4 + \frac{121}{4}}$$

$$= \sqrt{\frac{137}{4}}$$

$$= 5.85 \text{ unit/units}$$

Jarak K dari pusat bulatan adalah kurang daripada jejari bulatan.

∴ K terletak di dalam bulatan itu.

The distance of K from the centre of the circle is less than the radius of circle.

∴ K lies inside the circle.

Praktis Sumatif

1 $PQ = 2 - (-6)$

$$= 2 + 6$$

$$= 8 \text{ unit/units}$$

$$QR = 4 - (-2)$$

$$= 4 + 2$$

$$= 6 \text{ unit/units}$$

$$PR^2 = (2+6)^2 + (4+2)^2$$

$$= 8^2 + 6^2$$

$$= 100$$

$$PR = 10 \text{ unit/units}$$

$$PQ : QR = 8 : 6$$

$$= 4 : 3$$

Jawapan/Answer: D

2 $OP^2 = (4-0)^2 + (3-0)^2$

$$= 16 + 9$$

$$= 25$$

$$OP = 5 \text{ unit/units}$$

A $OT^2 = (2-0)^2 + (5-0)^2$

$$= 4 + 25$$

$$= 29$$

$$OT = \sqrt{29} \text{ unit/units}$$

B $OU^2 = (-3-0)^2 + (5-0)^2$

$$= 9 + 25$$

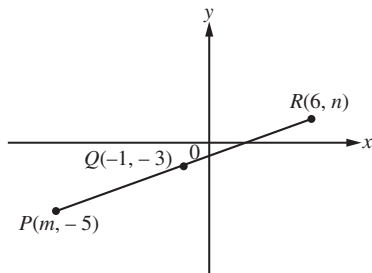
$$= 34$$

$$OU = \sqrt{34} \text{ unit/units}$$

C $OV = 0 - (-5)$
 $= 5 \text{ unit/units}$
D $OW^2 = (1 - 0)^2 + (-5 - 0)^2$
 $= 1 + 25$
 $= 26$
 $OW = \sqrt{26} \text{ unit/units}$

Jawapan/Answer: C

3



$$\left(\frac{m+6}{2}, \frac{-5+n}{2}\right) = (-1, -3)$$

$$\frac{m+6}{2} = -1$$

$$m+6 = -2$$

$$m = -8$$

$$\frac{-5+n}{2} = -3$$

$$-5+n = -6$$

$$n = -1$$

Jawapan/Answer: A

4 VW adalah selari dengan paksi-x.

VW is parallel to the x-axis.

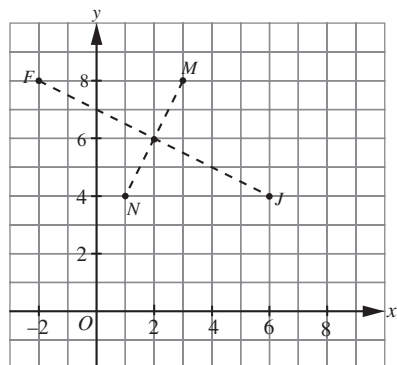
$$VW = 7$$

$$k - 2 = 7 \text{ atau/or } 2 - k = 7$$

$$k = 9 \text{ atau/or } k = -5$$

Jawapan/Answer: B

5



Titik tengah FJ ialah (2, 6).

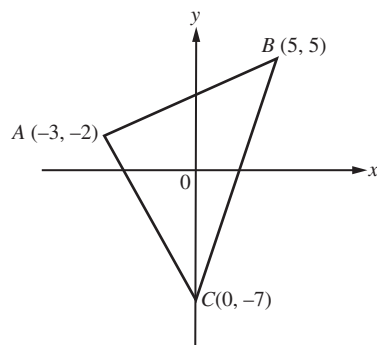
Midpoint of FJ is (2, 6).

Koordinat bagi titik N ialah (1, 4).

The coordinates of point N are (1, 4).

Jawapan/Answer: B

6



$$AB^2 = (5 + 3)^2 + (5 + 2)^2$$

$$= 8^2 + 7^2$$

$$= 113$$

$$BC^2 = (5 - 0)^2 + (5 + 7)^2$$

$$= 5^2 + 12^2$$

$$= 169$$

$$AC^2 = (-3 - 0)^2 + (-2 + 7)^2$$

$$= (-3)^2 + 5^2$$

$$= 34$$

$$AB^2 + AC^2 = 113 + 34$$

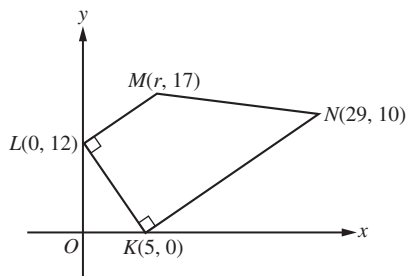
$$= 147$$

$$AB^2 + AC^2 \neq BC^2$$

$\therefore ABC$ bukan sebuah segi tiga bersudut tegak.

$\therefore ABC$ is not a right-angled triangle.

7



$$(a) KN^2 = (29 - 5)^2 + (10 - 0)^2$$

$$= 24^2 + 10^2$$

$$= 676$$

$$KN = \sqrt{676}$$

$$= 26 \text{ unit/units}$$

$$(b) KN = 2LM$$

$$LM = 13 \text{ unit/units}$$

$$LM^2 = 169$$

$$(r - 0)^2 + (17 - 12)^2 = 169$$

$$r^2 + 25 = 169$$

$$r^2 = 144$$

$$r = 12$$

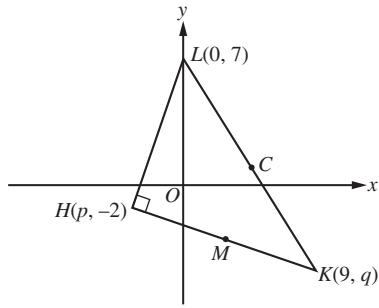
$$(c) \text{ Luas trapezium}$$

$$\text{Area of trapezium}$$

$$= \frac{1}{2} \times (13 + 26) \times 13$$

$$= \frac{1}{2} \times 39 \times 13$$

$$= 253.5 \text{ unit}^2/\text{units}^2$$



$$(a) \left(\frac{p+9}{2}, \frac{-2+q}{2} \right) = (3, -4)$$

$$\frac{p+9}{2} = 3$$

$$p+9 = 6$$

$$p = -3$$

$$\frac{-2+q}{2} = -4$$

$$-2+q = -8$$

$$q = -6$$

(b) KL ialah diameter bulatan.

KL is the diameter of the circle.

Pusat bulatan, C ialah titik tengah KL .

Centre of circle, C is the midpoint of KL .

$$C\left(\frac{9+0}{2}, \frac{-6+7}{2}\right) = C\left(\frac{9}{2}, \frac{1}{2}\right)$$

$$CH^2 = \left(\frac{9}{2} + 3\right)^2 + \left(\frac{1}{2} + 2\right)^2$$

$$= \left(\frac{15}{2}\right)^2 + \left(\frac{5}{2}\right)^2$$

$$= \frac{225}{4} + \frac{25}{4}$$

$$= \frac{250}{4}$$

$$CH = \sqrt{\frac{250}{4}}$$

$$= 7.91 \text{ unit/units}$$

Kaedah alternatif

Alternative method

$$KL^2 = (9-0)^2 + (-6-7)^2$$

$$= 9^2 + (-13)^2$$

$$= 81 + 169$$

$$= 250$$

$$KL = \sqrt{250}$$

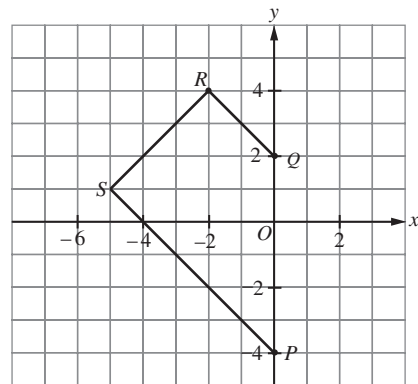
$$= 15.81 \text{ unit/units}$$

$$CH = \frac{1}{2}KL$$

$$= \frac{1}{2}(15.81)$$

$$= 7.91 \text{ unit/units}$$

9 (a)



$$S(-5, k) = S(-5, 1)$$

$$k = 1$$

(b) Titik tengah bagi PS

Midpoint of PS

$$= \left(\frac{0-5}{2}, \frac{-4+1}{2} \right)$$

$$= \left(-\frac{5}{2}, -\frac{3}{2} \right)$$

$$(c) RS^2 = (-2+5)^2 + (4-1)^2$$

$$= 3^2 + 3^2$$

$$= 9 + 9$$

$$= 18$$

$$RS = \sqrt{18}$$

$$= 4.24 \text{ unit/units}$$