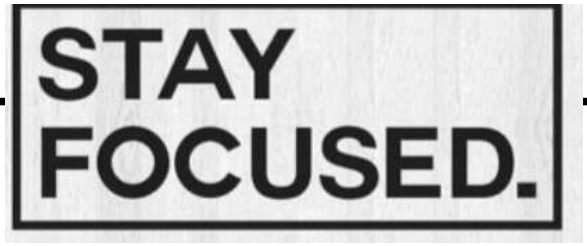


QUESTION 10 / SOALAN 10 (6M)

. BULATAN (CIRCLE)

NEGERI SEMBILAN

STAY FOCUSED.

Diagram 8 shows a semicircle $OPQR$ with diameter 28 cm. SOT is a quadrant of a circle centre O. T is a midpoint of OR.
Rajah 8 menunjukkan semibulatan $OPQR$ berpusat di O dengan diameter 28 cm. SOT ialah sukuan bulatan berpusat di O. T ialah titik tengah OR.

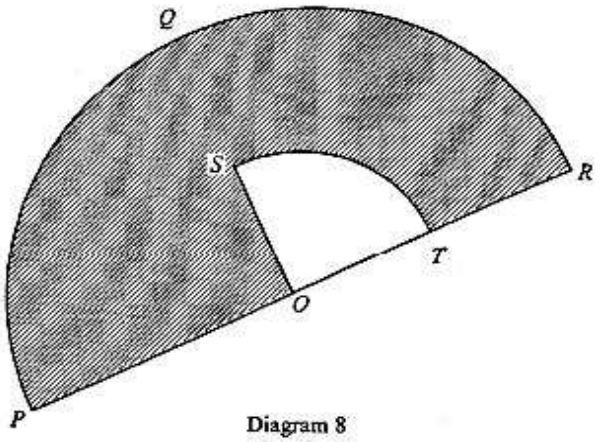


Diagram 8
Rajah 8

Using $\pi = \frac{22}{7}$, calculate / Menggunakan $\pi = \frac{22}{7}$, *hitung*

(a) The perimeter, in cm, the shaded region
Perimeter, dalam cm, kawasan berlorek

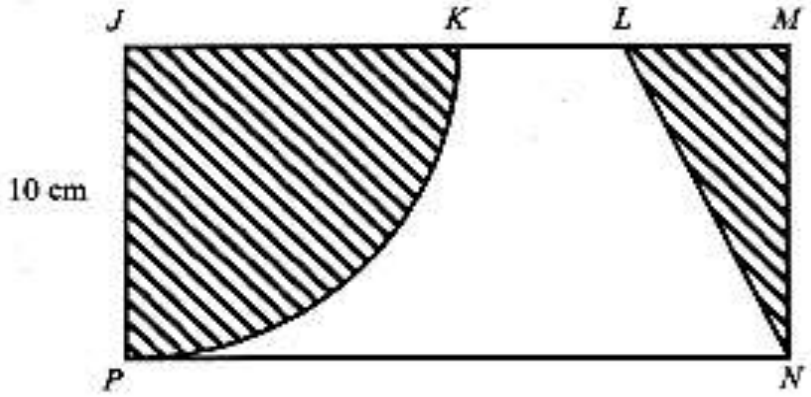
(b) The area, in cm^2, the shaded region.
Luas, dalam cm^2, kawasan berlorek.

Answer / *Jawapan* :

KEDAH SET 1

STAY FOCUSED.

Dalam Rajah 11, JKP ialah sukuan bulatan berpusat di J dan LMN ialah segi tiga bersudut tegak yang berada di dalam sebuah segi empat tepat $JMNP$.



Rajah 11

Diberi K ialah titik tengah bagi JM dan L ialah titik tengah bagi KM.

Menggunakan $\pi = \frac{22}{7}$, hitung,

(a) perimeter, dalam cm, kawasan berlorek,

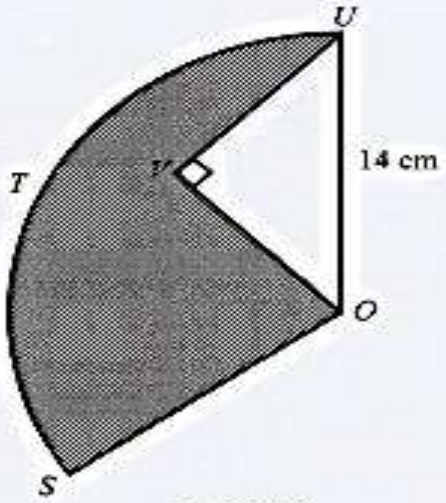
(b) luas, dalam cm^2, kawasan **tidak** berlorek.

Answer / *Jawapan* :

KEDAH SET 1

STAY FOCUSED.

Dalam Rajah 11, $OSTU$ ialah sektor bulatan berpusat di O dan OUV ialah segi tiga sama kaki yang terletak di dalam sektor bulatan tersebut.



Rajah 11

Diberi bahawa $UV = 9.90$ cm dan $\angle SOV = 75°$

Menggunakan $\pi = \frac{22}{7}$, hitung,

(a) perimeter, dalam cm, kawasan berlorek,

(b) luas, dalam cm^2, kawasan berlorek.

Answer / *Jawapan* :

TERENGGANU MODUL 1

STAY FOCUSED.

Diagram 9 shows an isosceles triangle. PR is an arc of the circle with centre at O and ORQ is a straight line.

Rajah 9 menunjukkan sebuah segi tiga sama kaki. PR ialah lengkok bagi satu bulatan yang berpusat di O dan ORQ ialah garis lurus.

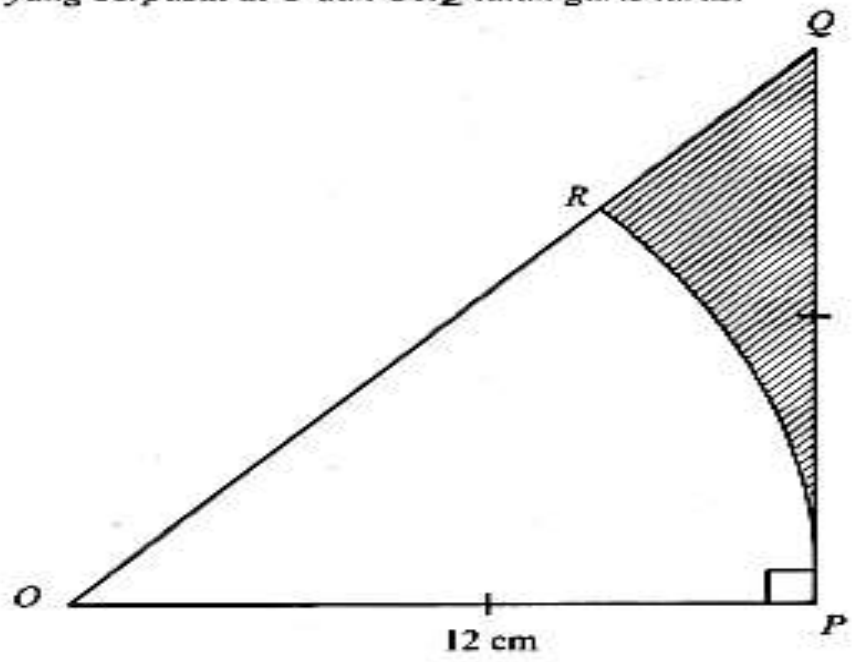


Diagram 9 / *Rajah 9*

Using $\pi = \frac{22}{7}$, calculate

Menggunakan $\pi = \frac{22}{7}$, *hitung*

(a) the area, in cm^2 of the shaded region.
luas, dalam cm^2 *kawasan berlorek.*

(b) the perimeter in cm, of the shaded region.
perimeter dalam cm, *kawasan berlorek.*

Answer / *Jawapan* :

PAHANG JUJ SET 2

STAY FOCUSED.

In Diagram 3, CD and AB are arcs of two different circles with centre O. DFE is a semicircle with diameter DE. DEOA and OBC are straight lines.
Dalam Rajah 8, CD dan AB ialah lengkuk bagi dua bulatan berlainan yang berpusat O. DFE ialah semibulatan dengan diameter DE. DEOA dan OBC ialah garis lurus.

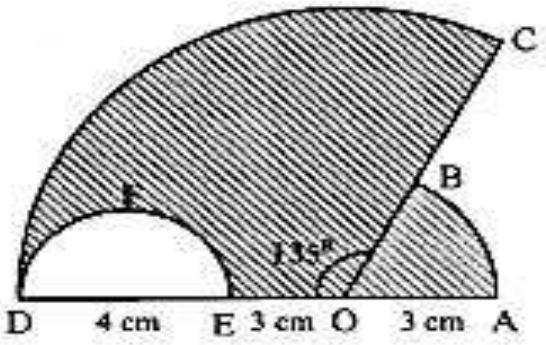


Diagram 3
Rajah 3

Using $\pi = \frac{22}{7}$, calculate

Dengan menggunakan $\pi = \frac{22}{7}$, hitungkan

(a)the perimeter, in cm, of the shaded region
perimeter, dalam cm, kawasan berlorek

(b)the area, in cm^2, of the shaded region
luas, dalam cm^2 *kawasan yang berlorek*

Answer / *Jawapan* :

PAHANG JUJ SET 1

STAY FOCUSED.

In Diagram 6, *OQRS* is a square and *OPQS* is a is a sector of a circle with centre *O*.
Dalam Rajah 6, OQRS ialah segi empat sama dan OPQS ialah sektor bagi sebuah bulatan berpusat O.

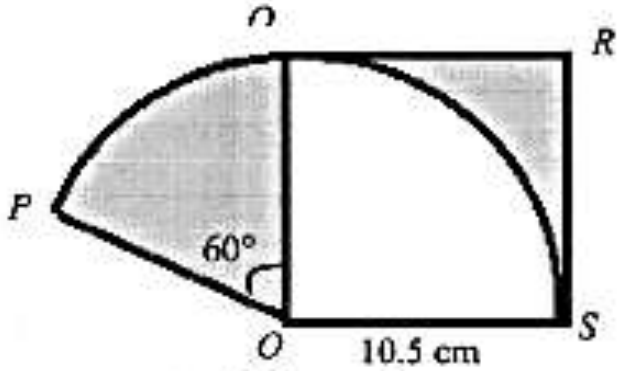


Diagram 6
Rajah 6

Using $\pi = \frac{22}{7}$, calculate

Menggunakan $\pi = \frac{22}{7}$, *hitung*

(a) the perimeter, in cm, of the whole diagram,
perimeter, dalam cm, *seluruh rajah itu,*

(b) the area, in cm^2, of the shaded region.
luas, dalam cm^2, *rantau yang berlorek.*

Answer / *Jawapan* :

PERLIS

STAY FOCUSED.

Diagram 8 shows two sectors, sector OPQ and sector ORS with common centre O.
Given that $\angle ROS = \frac{1}{3} \angle POQ$.

Rajah 8 menunjukkan dua sektor, sektor OPQ dan sektor ORS dengan pusat sepunya O.
Diberi bahawa $\angle ROS = \frac{1}{3} \angle POQ$.

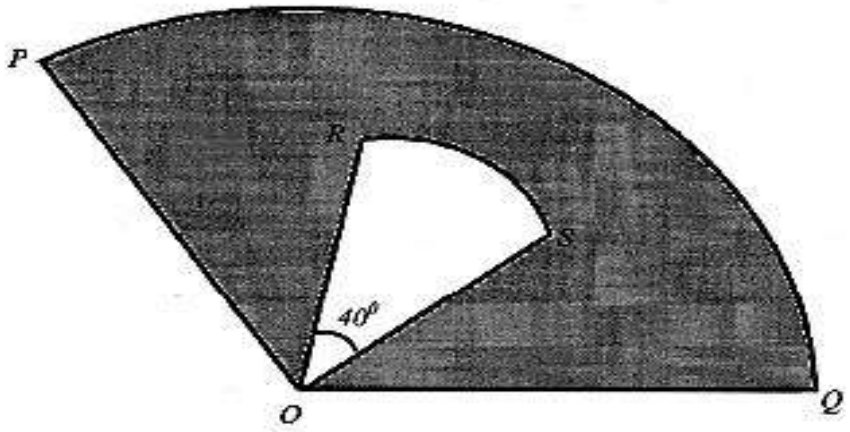


Diagram 8
Rajah 8

Given that $OR = 7$ cm.
Using $\pi = \frac{22}{7}$, calculate

Diberi bahawa $OR = 7$ cm.
Menggunakan $\pi = \frac{22}{7}$, *hitung*

(a) the radius, in cm, of the OP if the perimeter of the whole diagram is $57\frac{1}{3}$ cm.

jejari, dalam cm, OP jika perimeter seluruh rajah ialah $57\frac{1}{3}$ cm.

(b) the area, in cm^2, of the shaded region.

luas , dalam cm^2, *kawasan yang berlorek.*

Answer / *Jawapan* :

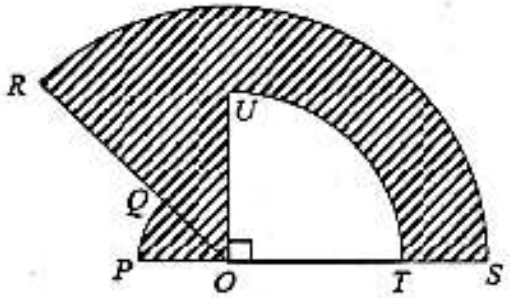
JOHOR (MUAR)

STAY FOCUSED.

Rajah 4 menunjukkan tiga sektor bulatan OTU, OPQ dan ORS dengan pusat sepunya O. SP adalah garis lurus.
Diberi $OP = TS = 7$ cm, $OT = 2OP$ dan $\angle SOR = 135°$.
Menggunakan $\pi = 3.142$, hitung

(a) perimeter, dalam cm, seluruh rajah itu

(b) luas, dalam cm^2, kawasan yang berlorek.



Rajah 4

Answer / *Jawapan* :

JOHOR SET 2

STAY FOCUSED.

Diagram 8 shows semicircle RSQ and semicircle PTQ. A is a centre of semicircle RSQ.
RPQ is a straight line.

Rajah 8 menunjukkan separuh bulatan RSQ dan separuh bulatan PTQ.
RPQ ialah garis lurus.

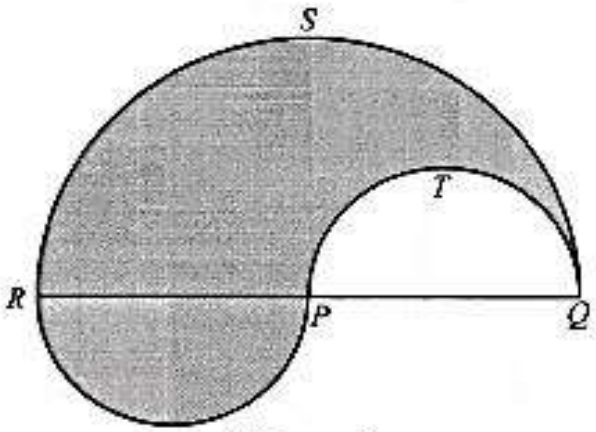


Diagram 8
Rajah 8

It is given that $PQ = RP = 17$ cm. Using $\pi = \frac{22}{7}$ and give answer in two decimal places, calculate

Diberi $PQ = RP = 17$ cm. *Dengan menggunakan* $\pi = \frac{22}{7}$ *dan beri jawapan kepada dua tempat perpuluhan, hitung*

(a) the perimeter, in cm, of the whole diagram,
perimeter, dalam cm, *seluruh rajah.*

(b) the area, in cm^2, of the shaded region.
luas, dalam cm^2, *kawasan yang berlorek itu.*

Answer / *Jawapan* :

Diagram 9 shows two sectors, *OPQ* and *ORST* with the same centre, *O*. *QROT* is straight line.

Rajah 9 menunjukkan dua sektor bulatan, OPQ dan ORST dengan pusat yang sama, O. QROT ialah garis lurus.

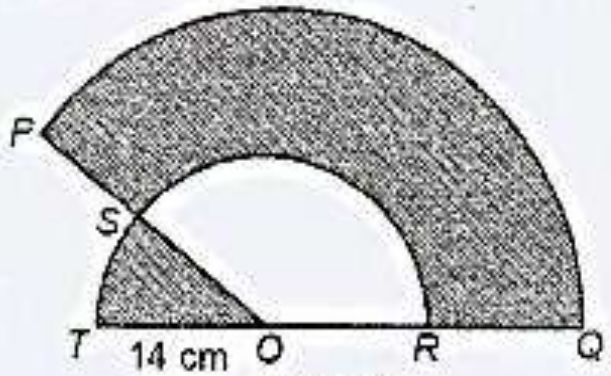


Diagram 9
Rajah 9

It is given that $\angle POQ = 140°$ and $OR = RQ$. Using $\pi = \frac{22}{7}$, calculate

Diberi $\angle POQ = 140°$ *dan* $OR = RQ$. *Menggunakan* $\pi = \frac{22}{7}$, *hitung*

(a) the perimeter, in cm, of the whole diagram,
perimeter, dalam cm, *seluruh rajah,*

(b) the area, in cm^2, of the shaded region.
luas, dalam cm^2, *kawasan yang berlorek.*

Answer / *Jawapan* :

SPM ULANGAN

STAY FOCUSED.

Diagram 8 shows a sector of FCE with centre E and a semicircle $ABCD$ with centre O. $AFOED$ is a straight line.

Rajah 8 menunjukkan sektor FCE dengan pusat E dan semibulatan ABCD dengan pusat O. AFOED ialah garis lurus.

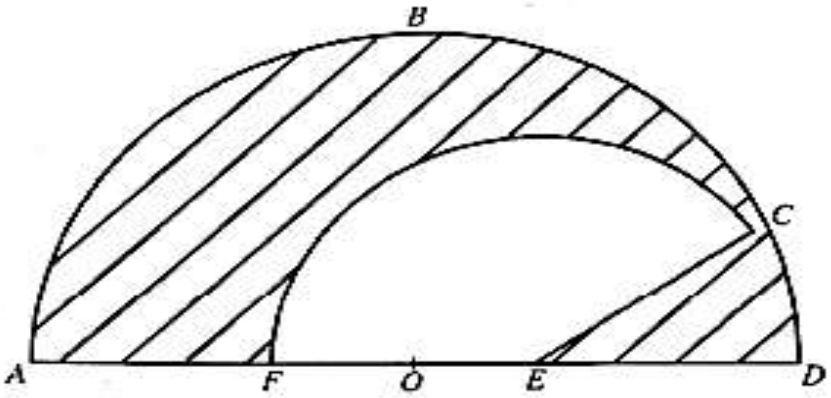


Diagram 8

Rajah 8

It is given that the diameter of semicircle $ABCD$ is 21 cm, $AF = FE = ED$ and $\angle DEC = 30°$.

Diberi bahawa diameter semibulatan ABCD ialah 21 cm, $AF = FE = ED$ *dan* $\angle DEC = 30°$.

Using $\pi = \frac{22}{7}$, calculate

Menggunakan $\pi = \frac{22}{7}$, *hitung*

(a) the area, in cm^2, of the shaded region,
luas, dalam cm^2, *kawasan yang berlorek,*

(b) the perimeter, in cm, of the shaded region.
perimeter, dalam cm, *kawasan yang berlorek.*

Answer / *Jawapan* :

ANSWER / JAWAPAN

STAY FOCUSED.

NEGERI SEMBILAN

(a) $\frac{180}{360}\times 2\times\frac{22}{7}\times 14$ or $\frac{90}{360}\times 2\times\frac{22}{7}\times 7$

$\frac{180}{360}\times 2\times\frac{22}{7}\times 14+\frac{90}{360}\times 2\times\frac{22}{7}\times 7+14+7+7$

or equivalent

83

(b) $\frac{180}{360}\times\frac{22}{7}\times 14^2$ or $\frac{90}{360}\times\frac{22}{7}\times 7^2$

$\frac{180}{360}\times\frac{22}{7}\times 14^2-\frac{90}{360}\times\frac{22}{7}\times 7^2$ or equivalent

269·5 or $\frac{539}{2}$ or $269\frac{1}{2}$

KEDAH SET 1

(a) $\frac{90}{360}\times 2\times\frac{22}{7}\times 10$ *atau* $\sqrt{10^2+5^2}$ *atau setara*

$\frac{90}{360}\times 2\times\frac{22}{7}\times 10+10+10+\sqrt{10^2+5^2}+10+5$ *atau setara*

61.89

(b) $\frac{90}{360}\times\frac{22}{7}\times 10^2$ *atau* $\frac{1}{2}\times 5\times 10$ *atau* 20×10 *atau setara*

$20\times 10-\frac{90}{360}\times\frac{22}{7}\times 10^2-\frac{1}{2}\times 5\times 10$ *atau setara*

$96\frac{3}{7}$ *atau* $\frac{675}{7}$ *atau* 96.43 *atau setara*

KEDAH SET 2

(a) $\frac{120}{360}\times 2\times\frac{22}{7}\times 14$ *atau setara*

$\frac{120}{360}\times 2\times\frac{22}{7}\times 14+14+9.9+9.9$ *atau setara*

$63\frac{2}{15}$ *atau* $\frac{947}{15}$ *atau* 63.13 *atau setara*

(b) $\frac{120}{360}\times\frac{22}{7}\times 14^2$ *atau* $\frac{1}{2}\times 9.9\times 9.9$ *atau setara*

$\frac{120}{360}\times\frac{22}{7}\times 14^2-\frac{1}{2}\times 9.9\times 9.9$ *atau setara*

156.33 *atau setara*

TERENGGANU MODUL 1

(a) $\frac{1}{2}\times 12\times 12$ *or* $\frac{45}{360}\times\frac{22}{7}\times 12^2$

$\frac{1}{2}\times 12\times 12-\frac{45}{360}\times\frac{22}{7}\times 12^2$

$15\frac{3}{7}$ *or* $\frac{108}{7}$ *or* 15.43

(b) $\sqrt{12^2+12^2}$ *or* $\frac{45}{360}\times 2\times\frac{22}{7}\times 12$

$12+\frac{45}{360}\times 2\times\frac{22}{7}\times 12+(\sqrt{12^2+12^2}-12)$

$26\frac{279}{700}$ *or* $\frac{18479}{700}$ *or* 26.4

PAHANG JUJ SET 2

a) $2\times\frac{22}{7}\times 7\times\frac{135}{360}=\frac{33}{2}$ *or* $2\times\frac{22}{7}\times 7\times\frac{45}{360}=\frac{33}{14}$ *or* $2\times\frac{22}{7}\times 4\times\frac{180}{360}=\frac{44}{7}$

$\frac{33}{2}+4+\frac{33}{14}+3+3+\frac{44}{7}$

$35\frac{1}{7}$ *or* $\frac{246}{7}$ *or* 35.14

b) $\frac{22}{7}\times 7^2\times\frac{135}{360}$ *or* $\frac{22}{7}\times 2^2\times\frac{180}{360}$ *or* $\frac{22}{7}\times 3^2\times\frac{45}{360}$

$\frac{231}{4}-\frac{44}{7}+\frac{99}{28}$

55

PAHANG JUJ SET 1

(a) $\frac{60°}{360°}\times 2\times\frac{22}{7}\times 10.5$

$\frac{60°}{360°}\times 2\times\frac{22}{7}\times 10.5+10.5+10.5+10.5+10.5$ or equivalent

53

(b) $\frac{60°}{360°}\times\frac{22}{7}\times 10.5^2$ or $\frac{90°}{360°}\times\frac{22}{7}\times 10.5^2$ or 10.5×10.5

$10.5\times 10.5-\frac{90°}{360°}\times\frac{22}{7}\times 10.5^2+\frac{60°}{360°}\times\frac{22}{7}\times 10.5^2$ or equivalent

81.38

ANSWER / JAWAPAN

STAY FOCUSED.

PERLIS

(a)
$$2j+\left[\frac{120}{360}\times 2\times\frac{22}{7}\times j\right]=57\frac{1}{3}$$
$$4\frac{2}{21}j=57\frac{1}{3}$$
$$14$$

(b)
$$\left[\frac{120}{360}\times\frac{22}{7}\times 14\times 14\right] \text{ or } \left[\frac{40}{360}\times\frac{22}{7}\times 7\times 7\right]$$
$$\left[\frac{120}{360}\times\frac{22}{7}\times 14\times 14\right]-\left[\frac{40}{360}\times\frac{22}{7}\times 7\times 7\right]$$
$$188\frac{2}{9}$$

JOHOR (MUAR)

a) $\frac{45^0}{360^0}\times 2\times\pi\times 7$ atau
$\frac{135^0}{360^0}\times 2\times\pi\times 21$

$$\frac{45^0}{360^0}\times 2\times\pi\times 7+\frac{135^0}{360^0}\times 2\times\pi\times 21+7+14+21$$
$$=96.98$$

b) $\frac{45^0}{360^0}\times\pi\times 7\times 7$ atau
$\frac{135^0}{360^0}\times\pi\times 21\times 21$ atau
$\frac{90^0}{360^0}\times\pi\times 14\times 14$

$$\frac{45^0}{360^0}\times\pi\times 7\times 7+\frac{135^0}{360^0}\times\pi\times 21\times 21-\frac{90^0}{360^0}\times\pi\times 14\times 14$$
$$=384.85$$

JOHOR SET 2

8 (a) *Perimeter*
$$=\left[\frac{180}{360}\times 2\times\frac{22}{7}\times 17\right]+17+\left[\frac{180}{360}\times 2\times\frac{22}{7}\times 8.5\right]$$
$$=97.14\text{ cm}$$

Area / Luas

(b)
$$\left[\frac{180}{360}\times\frac{22}{7}\times 17^2\right]-\left[\frac{180}{360}\times 2\times\frac{22}{7}\times(8.5)^2\right]+\left[\frac{180}{360}\times\frac{22}{7}\times 8.5^2\right]$$
ATAU $\frac{180}{360}\times\frac{22}{7}\times 17^2$
$$=454.14\text{ cm}$$

PULAU PINANG

(a) $\frac{40}{360}\times 2\times\frac{22}{7}\times 14$ or $\frac{140}{360}\times 2\times\frac{22}{7}\times 28$

Perimeter $=\frac{40}{360}\times 2\times\frac{22}{7}\times 14+\frac{140}{360}\times 2\times\frac{22}{7}\times 28+14+28+14$
$=134\frac{2}{9}$cm @ 134.222 @ $\frac{1208}{9}$

(b) $\frac{40}{360}\times\frac{22}{7}\times 14^2$ or $\frac{140}{360}\times\frac{22}{7}\times 28^2$ or $\frac{140}{360}\times\frac{22}{7}\times 14^2$

Area of the shaded region
$=\frac{40}{360}\times\frac{22}{7}\times 14^2+\frac{140}{360}\times\frac{22}{7}\times 28^2-\frac{140}{360}\times\frac{22}{7}\times 14^2$
$=787\frac{1}{9}\text{cm}^2$ @ 787.11 @ $\frac{7084}{9}$

SPM ULANGAN

(a)
$$\text{Luas kaws. berlorek}=\left(\frac{1}{2}\times\frac{22}{7}\times 10.5^2\right)-\left(\frac{150}{360}\times\frac{22}{7}\times 7^2\right)$$
$$=(173.25)-(64.167)$$
$$=109.083$$

(b)
$$\text{Perimeter kberlorek}=\left(\frac{1}{2}\times 2\times\frac{22}{7}\times 10.5\right)+\left(\frac{150}{360}\times 2\times\frac{22}{7}\times 7\right)+3(7)$$
$$=33+18.33+21$$
$$=72.33 \text{ atau } 72\frac{33}{100} \text{ atau } \frac{7233}{100}$$

TERENGGANU MODUL 2

1(a) $\left(\frac{45}{360}\times 2\times 3.142\times 27\right)$ @ $\left(\frac{90}{360}\times 2\times 3.142\times 9\right)$

$$\left(\frac{45}{360}\times 2\times 3.142\times 27\right)+\left(\frac{90}{360}\times 2\times 3.142\times 9\right)+27+14.27$$
$$76.62$$

(b) $\left(\frac{45}{360}\times 3.142\times 27^2\right)$@$\left(\frac{90}{360}\times 3.142\times 9^2\right)$ @ $\left(\frac{1}{2}\times 9\times 9\right)$

$$\left(\frac{45}{360}\times 3.142\times 27^2\right)-\left(\frac{90}{360}\times 3.142\times 9^2\right)-\left(\frac{1}{2}\times 9\times 9\right)$$
$$182.19$$