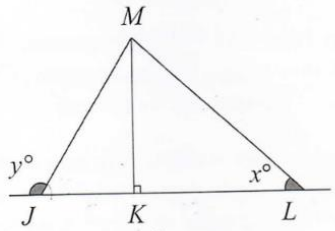
PERAK

NISBAH DAN GRAF FUNGSI TRIGONOMETRI

TERENGGANU

Rajah 4 menunjukkan satu garis lurus, *JKL* dengan panjang 18 cm.
Diagram 4 *shows a straight line, JKL with a length of* 18 cm.



Rajah 4 / *Diagram* 4

Diberi kos $y° = -0.3746$ dan nisbah $JK : KL = 1 : 2$. Hitung
Given cos $y° = -0.3746$ *and ratio* $JK : KL = 1 : 2$. *Calculate*

[4 markah / *marks*]

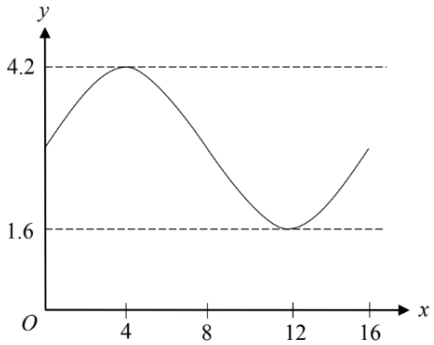
(a) panjang *KM*
length of KM
(b) tan $x°$

Jawapan / *Answer:*

(a)

(b)

Rajah 5 menunjukkan aras air yang direkodkan di sebuah limbungan kapal. Diberi y mewakili aras air, dalam meter dan x mewakili masa, dalam jam.
Diagram 5 *shows the water level recorded in a dockyard. Given that* y *represents the water level, in metre and* x *represents time, in hours.*



Rajah 5
Diagram 5

Nyatakan
State

(*a*) amplitud aras air,
the amplitude of the water level,

(*b*) tempoh aras air,
the period of the water level,

(*c*) fungsi trigonometri bagi graf tersebut dalam bentuk $y = a \sin bx + c$.
the trigonometric function of the graph in the form of $y = a \sin bx + c$.

[3 *markah*]
[3 *marks*]

Jawapan / *Answer* :

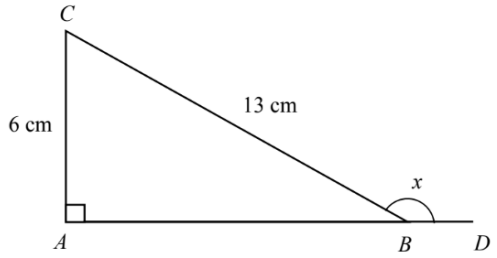
(*a*)

(*b*)

(*c*)

Rajah 6 menunjukkan segi tiga bersudut tegak *ABC*. Diberi *ABD* ialah garis lurus dan *AD = BC*.

The Diagram 6 shows a right-angled triangle ABC. Given ABD is a straight line and AD = BC.



Rajah 6
Diagram 6

(*a*) Cari panjang *BD*.
Find the length of BD.

(*b*) Cari nilai bagi
Find the value for
(i) sin *x*
(ii) tan *x*

[4 markah]
[4 *marks*]

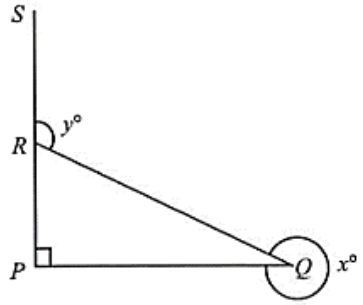
Jawapan / *Answer*:

(*a*)

(*b*) (i)

(ii)

Rajah 3 menunjukkan segitiga bersudut tegak, *PQR* dan *PRS* ialah garis lurus.
Diagram 3 shows a right-angled triangle, PQR and PRS is a straight line.



Rajah 3
Diagram 3

Diberi kos $y° = -\frac{7}{25}$.
Hitung nilai bagi tan $x°$. Seterusnya, tentukan nilai x.
Given kos $y° = -\frac{7}{25}$.
Calculate the value of tan $x°$. *Hence, determine the value of x.*

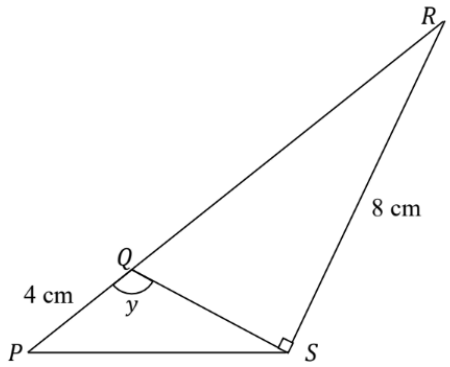
[4 *markah*]

Dalam Rajah 1 di bawah, PQR ialah garis lurus. Diberi bahawa $PQ:QR = 2:5$, cari kos y.

[3 *markah*]

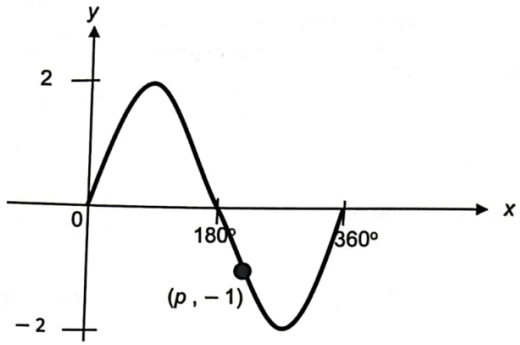
In Diagram 1 below, *PQR is a straight line. Given* $PQ:QR = 2:5$, *find* cos y.

[3 *marks*]



9. Rajah 5 menunjukkan graf suatu fungsi trigonometri bagi $0° \leq x \leq 360°$.

Diagram 5 *shows the graph of a trigonometric function for* $0° \leq x \leq 360°$



Rajah 5 / *Diagram* 5

(a) Nyatakan fungsi trigonometri tersebut.
State the trigonometric functions.

(b) Tentukan nilai *p*
Determine the p value

[3 markah / *marks*]

(a) Pada ruang jawapan, lakarkan graf $y = 3\sin 2x + 1$, untuk $0^0 \leq x \leq 360^0$.

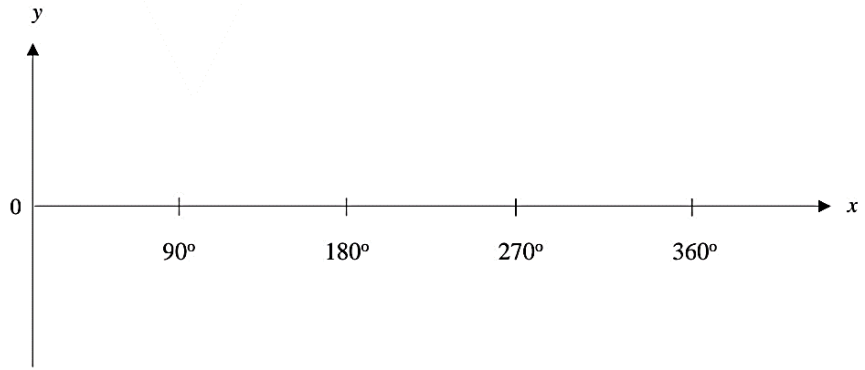
[2 markah]

(b) Seterusnya, cari nilai-nilai x apabila $y = 1$ selain $x = 0$

[2 markah]

Jawapan:

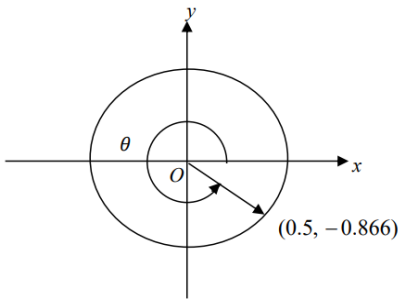
(a)



(b)

(a) Rajah 4.1 menunjukkan satu bulatan unit yang berpusat *O*.

Diagram 4.1 *shows a unit circle with centre O.*



Rajah 4.1
Diagram 4.1

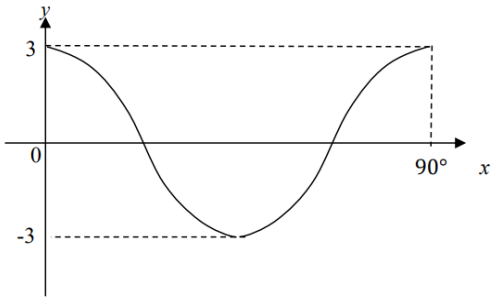
Tentukan nilai θ dan tan θ.

Determine the value of θ *and* tan θ.

[2 markah]
[2 *marks*]

(b) Rajah 4.2 menunjukkan graf $y = p$ *kos* qx untuk $0° \leq x \leq 90°$.

Diagram 4.2 *shows the graph of* $y = p$ *kos* qx *for* $0° \leq x \leq 90°$.



Rajah 4.2
Diagram 4.2

Nyatakan nilai-nilai bagi

State the value of

(i) p

(ii) q

[2 markah]

YIK

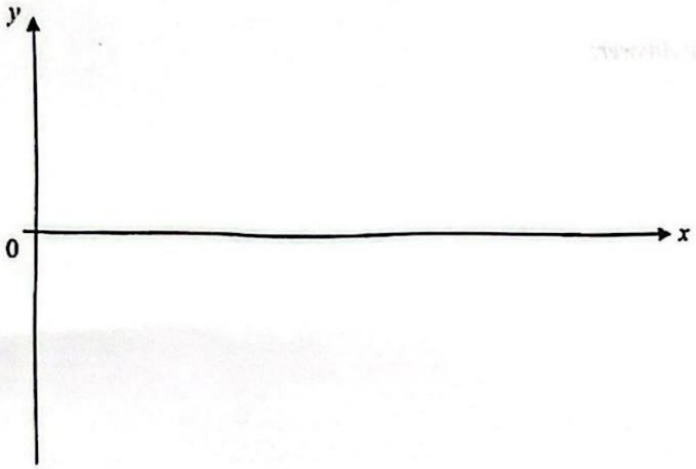
5. (a) Lakarkan graf y = 2 kos x dalam Rajah 3 di ruang jawapan bagi $0° \leq x \leq 360°$.
Sketch the graph of y = 2 kos x in the Diagram 3 in the answer space for $0° \leq x \leq 360°$.

(b) Seterusnya tentukan nilai minimum graf di 5(a).
Hence d*etermine the minimum value for the graph in 5(a).*

[4 *markah*]
[*4 marks*]

Jawapan/ *Answer:*

(a)



Rajah 3
Diagram 3

(b)