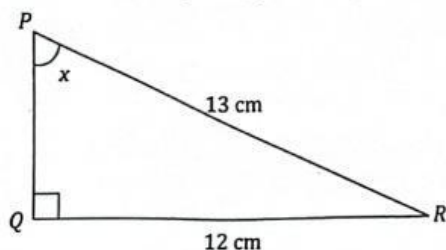


Bahagian A

5.1

Sinus, Kosinus dan Tangen bagi Sudut Tirus dalam Segi Tiga Bersudut Tegak
Sine, Cosine and Tangent of Acute Angles in Right-angled Triangles

- 1 Rajah 1 menunjukkan sebuah segi tiga bersudut tegak PQR.
Diagram 1 shows a right-angled triangle PQR.



Rajah 1/ Diagram 1

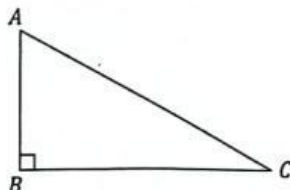
Cari nilai bagi kos x .
Find the value of $\cos x$.

- A $\frac{12}{5}$
B $\frac{12}{13}$
C $\frac{5}{12}$
D $\frac{5}{13}$

Tip Cemerlang

kosinus = $\frac{\text{sisi bersebelahan/ adjacent side}}{\text{hipotenus/ hypotenuse}}$

- 2 Rajah 2 menunjukkan sebuah segi tiga bersudut tegak ABC.
Diagram 2 shows a right-angled triangle ABC.

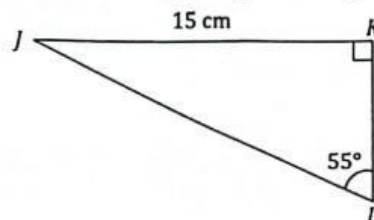


Rajah 2/ Diagram 2

Jika $\tan \angle ACB$ ialah 1, cari nilai bagi $\sin \angle BAC$.
If $\tan \angle ACB$ is 1, find the value of $\sin \angle BAC$.

- A $\frac{1}{2}$
B $\frac{1}{\sqrt{2}}$
C $\frac{1}{\sqrt{5}}$
D $\frac{\sqrt{5}}{2}$

- 3 Dalam Rajah 3, JKL ialah sebuah segi tiga bersudut tegak.
In Diagram 3, JKL is a right-angled triangle.



Rajah 3/ Diagram 3

Cari panjang, dalam cm, JL.
Find the length, in cm, of JL.

- A 10.50
B 18.31
C 23.29
D 26.15

- 4 Jika $\sin \theta = 0.8$ dan $\tan \theta = \frac{4}{3}$, cari nilai kos θ .

If $\sin \theta = 0.8$ and $\tan \theta = \frac{4}{3}$, find the value of $\cos \theta$.

- A 0.4
B 0.6
C 0.94
D 1.0

- 5 Diberi $\sin \theta = \frac{1}{2}$ dan $\cos \theta = \frac{\sqrt{3}}{2}$, cari nilai $\tan \theta$.

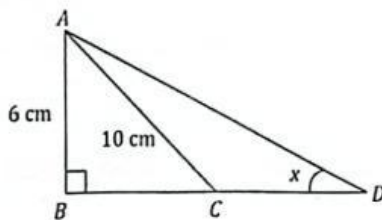
Given $\sin \theta = \frac{1}{2}$ and $\cos \theta = \frac{\sqrt{3}}{2}$, find the value $\tan \theta$.

- A $\sqrt{3}$
B 1
C $\frac{1}{\sqrt{2}}$
D $\frac{1}{\sqrt{3}}$

- 6 Tanpa menggunakan kalkulator, cari nilai bagi $3 \tan 60^\circ - 2 \cos 30^\circ$.
Without using a calculator, find the value of $3 \tan 60^\circ - 2 \cos 30^\circ$.

- A $2\sqrt{3}$
B $\frac{\sqrt{3}}{2}$
C $\frac{2}{\sqrt{3}}$
D 1

- 7 Rajah 4 menunjukkan sebuah segi tiga bersudut tegak ABC dan garis lurus BCD .
Diagram 4 shows a right-angled triangle ABC and a straight line BCD .



Rajah 4/ Diagram 4

Jika $BC = CD$, cari $\tan x$.
If $BC = CD$, find $\tan x$.

- A $\frac{3}{4}$
B $\frac{1}{2}$
C $\frac{3}{8}$
D $\frac{5}{8}$

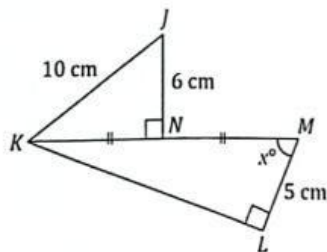
Tip Cemerlang

tangen = $\frac{\text{sisi bertentangan/ opposite side}}{\text{sisi bersebelahan/ adjacent side}}$

Tip Cemerlang

Nilai nisbah hendaklah dinyatakan dalam sebutan terendah.
Ratio value should be given in the simplest term.

- 8 Rajah 5 menunjukkan dua buah segi tiga bersudut tegak, JKN dan KLM .
Diagram 5 shows two right-angled triangles, JKN and KLM .

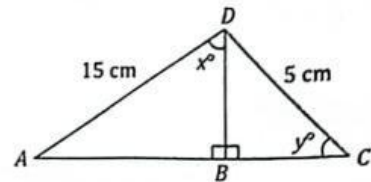


Rajah 5/ Diagram 5

Cari nilai $\cos x$.
Find the value of $\cos x$.

- A $\frac{5}{8}$
B $\frac{1}{2}$
C $\frac{5}{16}$
D $\frac{3}{16}$

- 9 Dalam Rajah 6, ABD dan BCD adalah segi tiga bersudut tegak.
In Diagram 6, ABD and BCD are right-angled triangles.



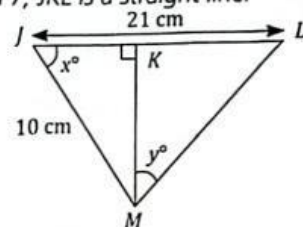
Rajah 6/ Diagram 6

Diberi ABC ialah garis lurus dan $\cos y = \frac{3}{5}$.
Cari nilai $\cos x$.

Given that ABC is a straight line and $\cos y = \frac{3}{5}$. Find the value of $\cos x$.

- A $\frac{3}{4}$
B $\frac{4}{5}$
C $\frac{1}{3}$
D $\frac{4}{15}$

- 10 Dalam Rajah 7, JKL ialah garis lurus.
In Diagram 7, JKL is a straight line.



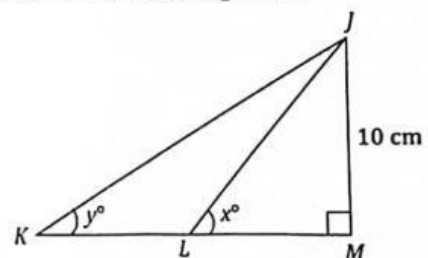
Rajah 7/ Diagram 7

Diberi $\sin x = \frac{4}{5}$, cari nilai $\cos y$.

Given that $\sin x = \frac{4}{5}$, find the value of $\cos y$.

- A $\frac{8}{15}$
B $\frac{8}{17}$
C $\frac{10}{21}$
D $\frac{15}{17}$

- 11 Dalam Rajah 8, JKM dan JLM adalah segi tiga bersudut tegak dan KLM adalah garis lurus.
In Diagram 8, JKM and JLM are right-angled triangles and KLM is a straight line.



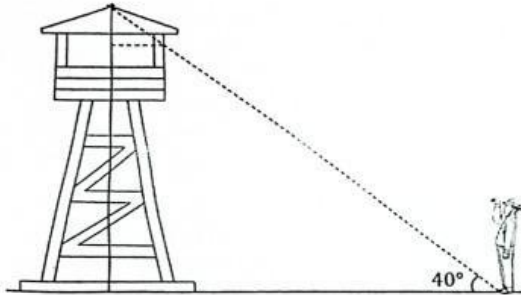
Rajah 8/ Diagram 8

Diberi $\tan x = \frac{5}{4}$ dan $\tan y = \frac{2}{3}$. Cari panjang dalam cm, KL .

Given that $\tan x = \frac{5}{4}$ and $\tan y = \frac{2}{3}$. Find the length, in cm, of KL .

- A 5
B 6
C 7
D 8

- 12** Rajah 9 menunjukkan kedudukan seorang renjer dari menara pemerhati.
Diagram 9 shows a ranger's position from an observation tower.

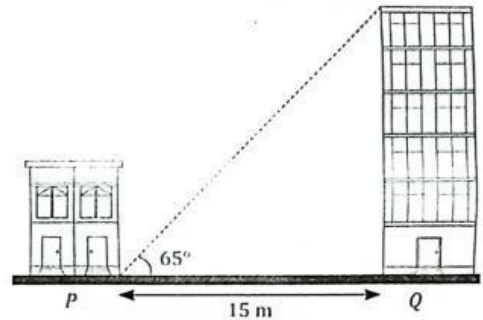


Rajah 9/ Diagram 9

Renjer itu berada 12.5 m dari menara itu.
Berapakah tinggi, dalam m, menara itu?
The ranger is 12.5 m from the tower. What is the height, in m, of the tower?

- A** 9.78 **C** 10.89
B 10.49 **D** 11.25

- 13** Rajah 10 menunjukkan kedudukan bangunan, P dan Q.
Diagram 10 shows the buildings, P and Q.



Rajah 10/ Diagram 10

Berapakah tinggi, dalam m, bangunan Q?
What is the height, in m, of building Q?

- A** 6.34
B 13.59
C 14.31
D 32.17