

# BAB 5

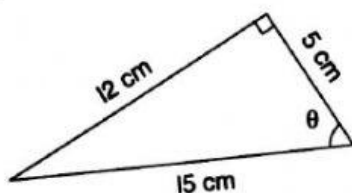
## Nisbah Trigonometri Trigonometric Ratios

### 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

#### Bahagian A Section A

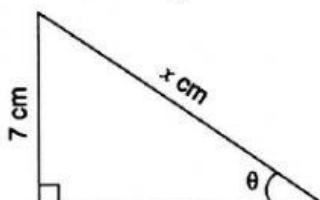
Tulis jawapan dalam ruangan yang disediakan.

1. Rajah menunjukkan sebuah segi tiga bersudut tegak. Cari nilai  $\sin \theta$ .  
Diagram shows a right-angled triangle. Find the value of  $\sin \theta$ .



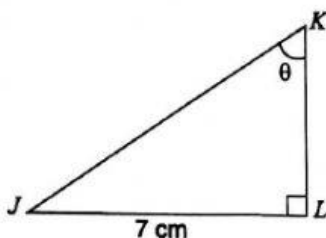
- A  $\frac{5}{12}$                       C  $\frac{5}{15}$   
B  $\frac{12}{15}$                       D  $\frac{15}{5}$

2. Diberi nilai  $\sin \theta = \frac{2}{5}$ , hitung panjang sisi  $x$ .  
Given the value of  $\sin \theta = \frac{2}{5}$ , calculate the length of  $x$ .



- A 14 cm                      C 16 cm  
B 15.5 cm                      D 17.5 cm

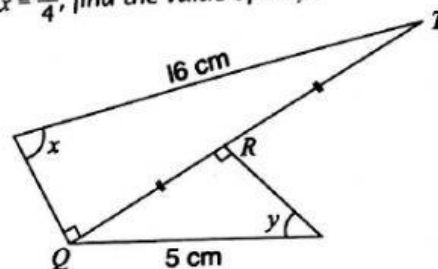
3.  $JKL$  ialah sebuah segi tiga bersudut tegak. Diberi nilai  $\sin \theta = 0.27$ , hitung panjang  $JK$ , dalam cm.  
 $JKL$  is a right-angled triangle. Given the value of  $\sin \theta = 0.27$ , calculate the length of  $JK$ , in cm.



- A 18.9 cm                      C 31.8 cm  
B 25.92 cm                      D 34.28 cm

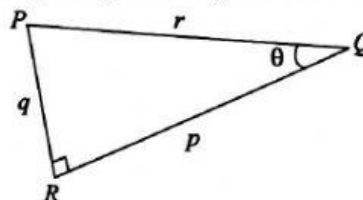
Matematik Tingkatan 3

4. Dalam rajah,  $QRT$  ialah garis lurus. Diberi  $QR = ST$  dan  $\sin x = \frac{3}{4}$ , cari nilai  $\sin y$ .  
In diagram,  $QRT$  is a straight line. Given  $QR = ST$  and  $\sin x = \frac{3}{4}$ , find the value of  $\sin y$ .



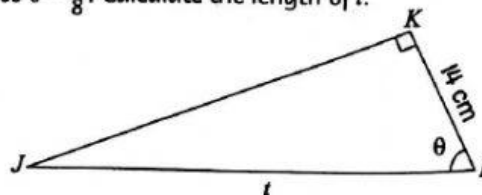
- A  $\frac{3}{16}$                       C  $\frac{4}{5}$   
B  $\frac{5}{16}$                       D  $\frac{6}{5}$

5.  $PQR$  ialah sebuah segi tiga bersudut tegak. Nyatakan nilai  $\cos \theta$ .  
 $PQR$  is a right-angled triangle. State the value of  $\cos \theta$ .



- A  $\frac{q}{r}$                       C  $\frac{q}{p}$   
B  $\frac{p}{r}$                       D  $\frac{p}{q}$

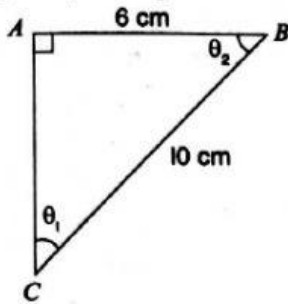
6. Dalam rajah,  $JKL$  ialah sebuah segi tiga bersudut tegak. Diberi  $\cos \theta = \frac{7}{8}$ . Hitung nilai  $t$ .  
In diagram,  $JKL$  is a right-angled triangle. Given  $\cos \theta = \frac{7}{8}$ . Calculate the length of  $t$ .



- A 10 cm                      C 18 cm  
B 16 cm                      D 24 cm

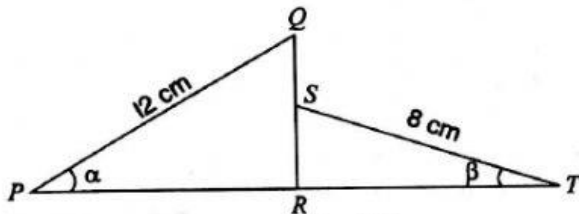
Mathematics Form 3

7. Dalam rajah,  $ABC$  ialah sebuah segi tiga bersudut tegak. Hitung nilai  $\cos \theta_1 + \cos \theta_2$ .  
In diagram,  $ABC$  is a right-angled triangle. Calculate the value of  $\cos \theta_1 + \cos \theta_2$ .



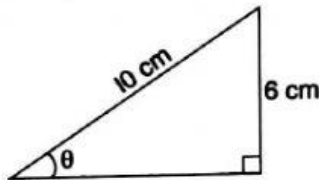
- A  $\frac{7}{10}$                       C  $1\frac{2}{5}$   
B  $\frac{9}{10}$                       D  $1\frac{3}{10}$

8. Dalam rajah,  $PRT$  ialah garis lurus. Diberi  $\cos \alpha = 0.6$  dan  $\cos \beta = 0.4$ . Hitung panjang  $PRT$ , dalam cm.  
In diagram,  $PRT$  is a straight line. Given  $\cos \alpha = 0.6$  and  $\cos \beta = 0.4$ . Calculate the length of  $PRT$ , in cm.



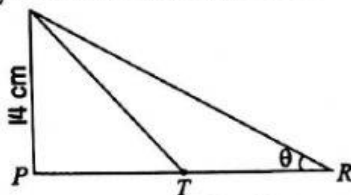
- A 7.2                      C 9.2  
B 8.4                      D 10.4

9. Cari nilai  $\tan \theta$ .  
Find the value of  $\tan \theta$ .



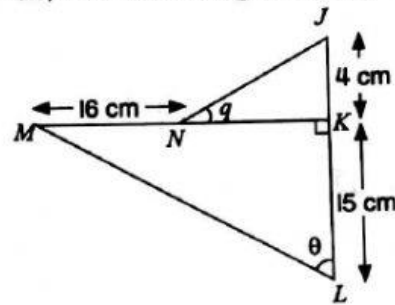
- A  $\frac{3}{4}$                       C  $\frac{3}{8}$   
B  $\frac{3}{5}$                       D  $\frac{7}{10}$

10. Dalam rajah,  $T$  ialah titik tengah bagi garis  $PR$ . Diberi  $\tan \theta = \frac{2}{5}$ . Hitung panjang  $TR$ .  
In diagram,  $T$  is a mid-point of line  $PR$ . Given  $\tan \theta = \frac{2}{5}$ . Calculate the length of  $TR$ .



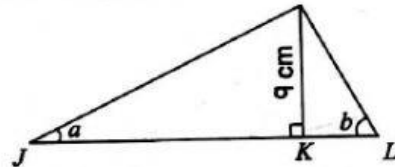
- A 17.5 cm                      C 32 cm  
B 21.5 cm                      D 35 cm

11. Dalam rajah,  $JKL$  dan  $MNK$  adalah dua garis lurus. Diberi  $\tan q = 0.8$ , hitung panjang  $ML$ , dalam cm.  
In diagram,  $JKL$  and  $MNK$  are two straight lines. Given  $\tan q = 0.8$ , calculate the length of  $ML$ , in cm.



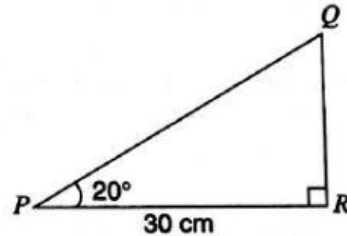
- A 12.6 cm                      C 14.3 cm  
B 25.8 cm                      D 21.8 cm

12. Dalam rajah,  $JKL$  ialah garis lurus. Diberi  $\tan a = 22.5^\circ$  dan  $\tan b = 77^\circ$ , hitung panjang  $JKL$ .  
In diagram,  $JKL$  is a straight line. Given  $\tan a = 22.5^\circ$  and  $\tan b = 77^\circ$ , calculate the length of  $JKL$ .



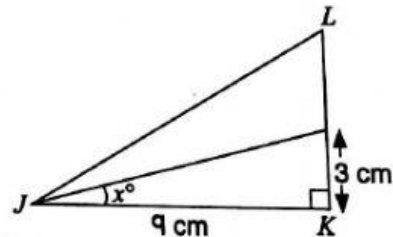
- A 18.98 cm                      C 22.68 cm  
B 21.72 cm                      D 23.82 cm

13.  $PQR$  ialah sebuah segi tiga bersudut tegak. Diberi  $\sin 20^\circ = 0.34$ ,  $\cos 20^\circ = 0.94$  dan  $\tan 20^\circ = 0.36$ . Hitung panjang  $QR$ .  
 $PQR$  is a right-angled triangle. Given  $\sin 20^\circ = 0.34$ ,  $\cos 20^\circ = 0.94$  and  $\tan 20^\circ = 0.36$ . Calculate the length of  $QR$ .



- A 10.2 cm                      C 20.8 cm  
B 10.8 cm                      D 28.2 cm

14.  $JKL$  ialah sebuah segi tiga bersudut tegak. Hitung panjang  $JL$ .  
 $JKL$  is a right-angled triangle. Calculate the length of  $JL$ .



- A 23 cm                      C 27 cm  
B 24 cm                      D 30 cm