

# Teorem Pythagoras

## Pythagoras' Theorem

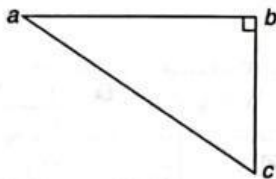
### Bahagian A / Section A

#### 13.1 Teorem Pythagoras

##### Pythagoras' Theorem

- 1 Rajah 1 menunjukkan sebuah segi tiga bersudut tegak,  $abc$ .

Diagram 1 shows a right-angled triangle,  $abc$ .



Rajah 1 / Diagram 1

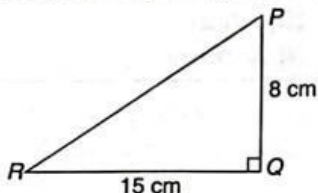
Nyatakan hubungan antara panjang sisi-sisi segi tiga bersudut tegak tersebut.

State the relationship between the lengths of the sides of the right-angled triangle.

- A  $ac^2 = ab^2 - bc^2$       C  $ab^2 = ac^2 + bc^2$   
B  $ac^2 = ab^2 + bc^2$       D  $bc^2 = ab^2 + ac^2$

- 2 Rajah 2 menunjukkan sebuah segi tiga bersudut tegak PQR.

Diagram 2 shows a right-angled triangle PQR.



Rajah 2 / Diagram 2

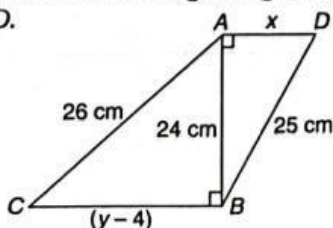
Cari panjang, dalam cm, bagi PR.

Find the length, in cm, of PR.

- A 7      C 17  
B 14      D 23

- 3 Rajah 3 menunjukkan dua buah segi tiga bersudut tegak, ABC dan ABD.

Diagram 3 shows two right-angled triangles, ABC and ABD.



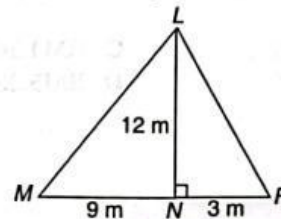
Rajah 3 / Diagram 3

Cari nilai  $y - x$ .

Find the value of  $y - x$ .

- A 3 cm  
B 7 cm  
C 10 cm  
D 17 cm

- 4 Helmi ingin membina sebuah bingkai kayu. Rajah 4 menunjukkan ukuran bingkai kayu itu. Helmi wants to build a wooden frame. Diagram 4 shows the dimensions of the wooden frame.



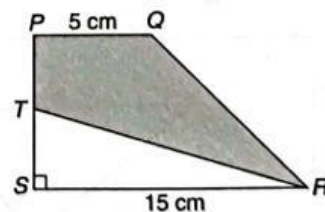
Rajah 4 / Diagram 4

Cari panjang kayu, dalam m, yang diperlukan untuk membuat bingkai kayu tersebut.

Find the length of wood, in m, required to make the wooden frame.

- A 12.37      C 27.37  
B 15.37      D 51.37

- 5 Rajah 5 menunjukkan sebuah trapezium PQRS. T ialah titik tengah bagi garis lurus PS. Diberi bahawa luas trapezium tersebut ialah  $160 \text{ cm}^2$ . Diagram 5 shows a trapezium PQRS. T is the midpoint of the straight line PS. It is given that the area of the trapezium is  $160 \text{ cm}^2$ .



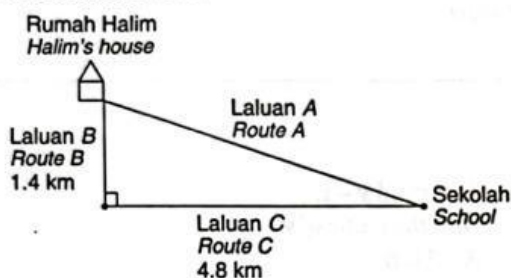
Rajah 5 / Diagram 5

Hitung luas, dalam  $\text{cm}^2$ , kawasan yang berlorek.

Calculate the area, in  $\text{cm}^2$ , of the shaded area.

- A 40      C 100  
B 84      D 150

- 6 Rajah 6 menunjukkan jarak di antara rumah Halim dengan sekolahnya.  
Diagram 6 shows the distance between Halim's house and his school.



Rajah 6 / Diagram 6

Kadar tambang bas sekolah Halim adalah RM0.85 untuk 1 km. Berapakah tambang yang perlu dibayar oleh Halim sekiranya bas tersebut mengikut laluan A?

Halim's school bus fare is RM0.85 for 1 km. How much fare does Halim have to pay if the bus follows route A?

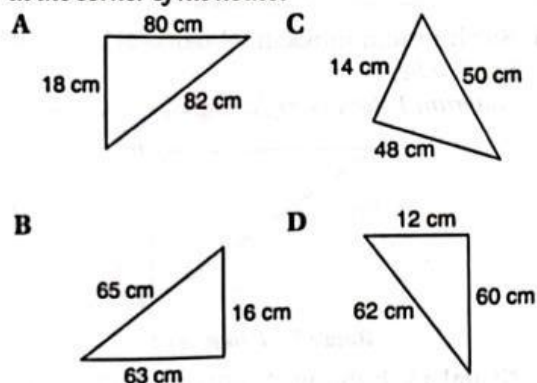
- A RM3.55                      C RM4.50  
B RM4.25                      D RM5.25

### 13.2 Akas Teorem Pythagoras The Converse of Pythagoras' Theorem

- 7 Encik Suffy hendak memasang bingkai kayu yang berbentuk segi tiga bersudut tegak pada sesiku rumahnya. Bingkai kayu yang manakah tidak sesuai dipasang pada sesiku rumahnya?

**KBAT** - Menganalisis

Encik Suffy wants to install a right-angled triangular wooden frame at a corner of his house. Which wooden frame is not suitable to be installed at the corner of his house?



### Bahagian B / Section B

- 8 (a) Nyatakan hipotenus bagi setiap segi tiga bersudut tegak berikut.  
State the hypotenuse of each of the following right-angled triangles.

[2 markah/marks]

Jawapan/Answer:

| Segi tiga bersudut tegak<br>Right-angled triangle | Hipotenus<br>Hypotenuse |
|---------------------------------------------------|-------------------------|
| (i)                                               |                         |
| (ii)                                              |                         |