

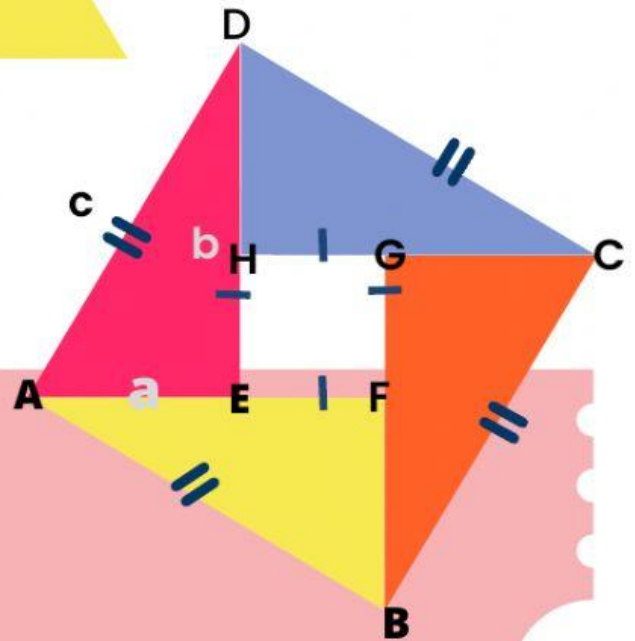
# Pembuktian Teorema Pythagoras

## AYO MENCoba

1. Sediakan 4 buah segitiga siku siku yang sama



2. atur sehingga membentuk seperti dibawah ini



$$AB = BC = CD = \dots = \dots$$

$$EF = \dots = \dots = \dots = \dots$$

$$AE = \dots = \dots = \dots = \dots$$

$$DE = \dots = \dots = \dots = \dots$$

$$EF = AF - AE = b - \dots$$

$$\longleftrightarrow \text{Luas } ABCD = 4 \text{ Luas } ABC + \text{Luas } EFGH$$

$$\longleftrightarrow AB^2 = 4 \times \frac{1}{2} \times AE \times DE + EF^2$$

$$\longleftrightarrow c^2 = 2 \times \dots \times \dots + (b - \dots)^2$$

$$c^2 = 2ab + b^2 - 2ab + \dots^2$$

$$c^2 = b^2 + \dots^2$$

TERBUKTI BAHWA

$$c^2 = a^2 + b^2$$

# LEMBAR KERJA PESERTA DIDIK (LKPD)

1. Berdasarkan gambar di samping

$$LI = 4 \times 4 = \dots\dots$$

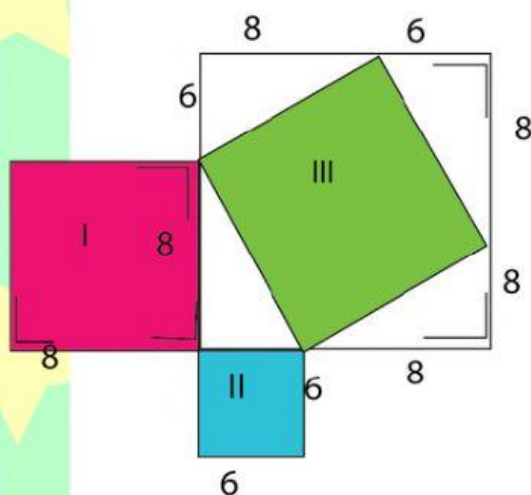
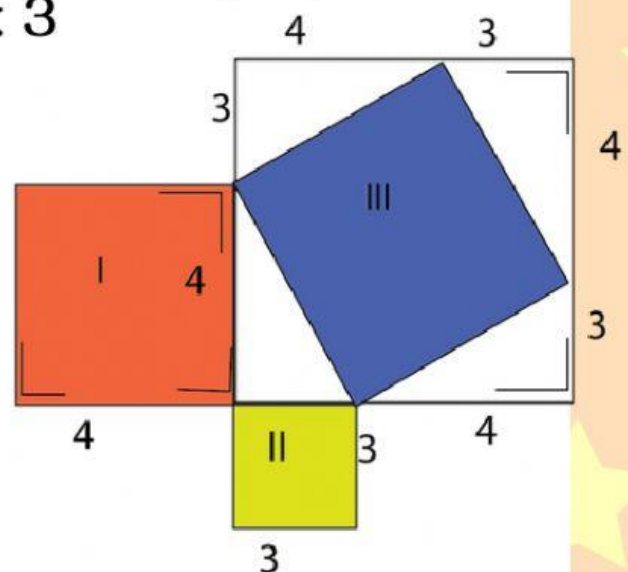
$$LII = 3 \times 3 = \dots\dots$$

LIII = Luas persegi - 4 Luas segitiga

$$LIII = 7 \times 7 - 4 \times \frac{1}{2} \times 4 \times 3$$

$$LIII = \dots\dots - \dots\dots$$

$$LIII = \dots\dots$$



2. Berdasarkan gambar di samping

$$LI = \dots\dots \times \dots\dots = \dots\dots$$

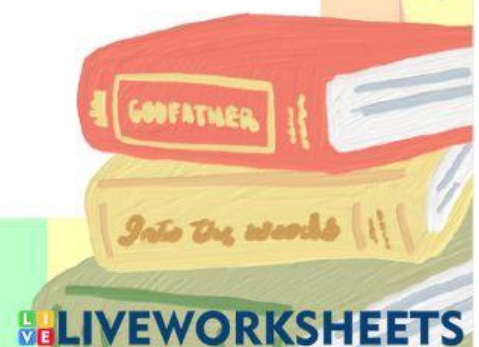
$$LII = \dots\dots \times \dots\dots = \dots\dots$$

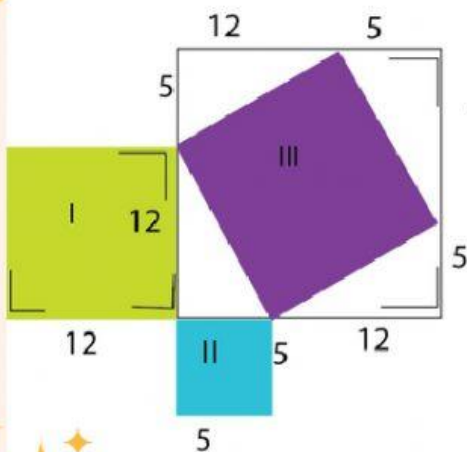
LIII = Luas persegi - 4 Luas segitiga

$$LIII = \dots \times \dots - 4 \times \frac{1}{2} \times \dots \times \dots$$

$$LIII = \dots\dots - \dots\dots$$

$$LIII = \dots\dots$$





3. Berdasarkan gambar di samping

$$L I = \dots \times \dots = \dots$$

$$L II = \dots \times \dots = \dots$$

$L III = \text{Luas persegi} - 4 \text{ Luas segitiga}$

$$L III = \dots \times \dots - 4 \times \frac{1}{2} \times \dots \times \dots$$

$$L III = \dots - \dots$$

$$L III = \dots$$

Berdasarkan ketiga kegiatan di atas lengkapilah tabel di bawah ini !

| No | LUAS |     |      |
|----|------|-----|------|
|    | LI   | Lii | Liii |
| 1  |      |     |      |
| 2  |      |     |      |
| 3  |      |     |      |

Dari tabel di atas :

$$1. \begin{aligned} L I &= 9 = 3 \times 3 = 3^2 \\ L II &= 16 = 4 \times 4 = 4^2 \\ L III &= 25 = 5 \times 5 = 5^2 \end{aligned}$$

$$2. L I = \dots = \dots \times \dots = \dots$$

$$L II = \dots = \dots \times \dots = \dots$$

$$L III = \dots = \dots \times \dots = \dots$$

$$3. L I = \dots = \dots \times \dots = \dots$$

$$L II = \dots = \dots \times \dots = \dots$$

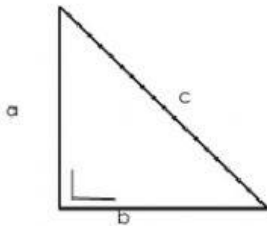
$$L III = \dots = \dots \times \dots = \dots$$

4. Hubungan antara LI , LII ,dan LIII adalah :

$$L III = \dots + \dots$$

# Catatan

Dari kegiatan di atas dapat disimpulkan bahwa :

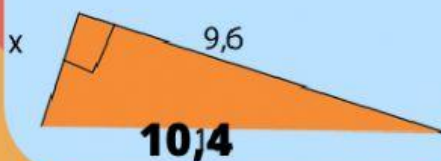
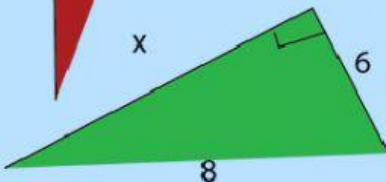
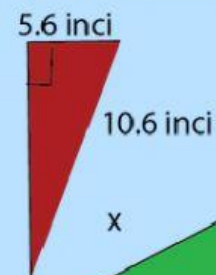
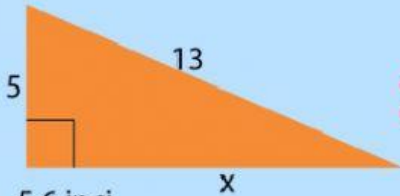
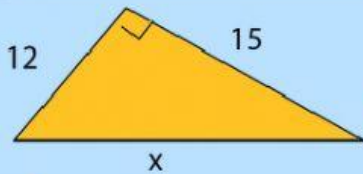


$$c^2 = \frac{a^2}{\dots} + \frac{b^2}{\dots}$$

$$a^2 = \frac{c^2}{\dots} - \frac{b^2}{\dots}$$

$$b^2 = \frac{c^2}{\dots} - \frac{a^2}{\dots}$$

- Gunakan teorema pythagoras untuk menentukan nilai yang belum diketahui pada masing - masing gambar di bawah ini!



$2\sqrt{7}$



4



19,20

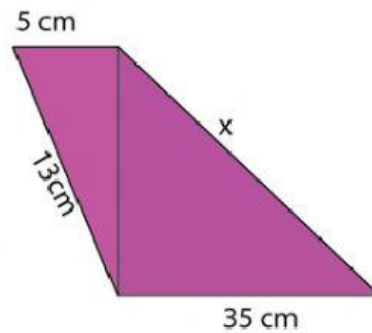
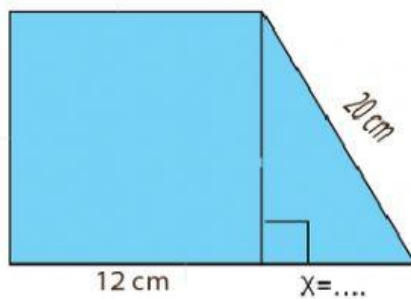


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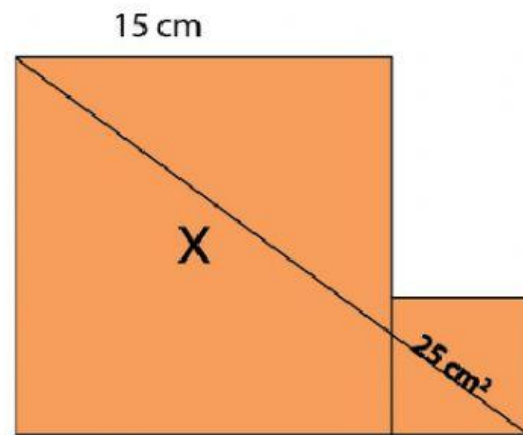


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2. Tentukan nilai  $x$  pada kedua gambar di bawah ini !



3. Perhatikan gambar dua persegi di samping Panjang sisi persegi besar adalah 15 cm Luas persegi kecil 25 cm<sup>2</sup> Tentukan nilai  $x$   
 $x = \dots$



4. Perhatikan gambar di bawah. Diketahui  $\triangle ABC$  siku-siku di  $B$  dengan panjang  $AC = 40$  cm dan  $BC = 24$  cm. Titik  $D$  terletak pada  $AB$  sedemikian sehingga panjang  $CD = 25$  cm.  
 Panjang  $AD = \dots$  cm

