

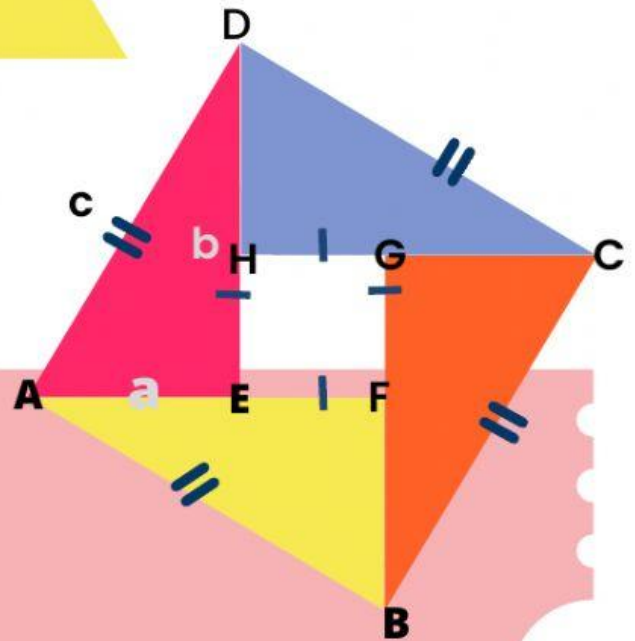
Pembuktian Teorema Pythagoras

AYO MENCOBA

1. Sediakan 4 buah segitiga siku siku yang sama



2. atur sehingga membentuk seperti dibawah ini



$$AB=BC=CD=....=...$$

$$EF=....=....=....=...$$

$$AE=....=....=....=...$$

$$DE=....=....=....=...$$

$$EF = AF - AE = b -$$

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

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

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

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

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

TERBUKTI BAHWA

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

LEMBAR KERJA PESERTA DIDIK (LKPD)

1. Berdasarkan gambar di samping

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

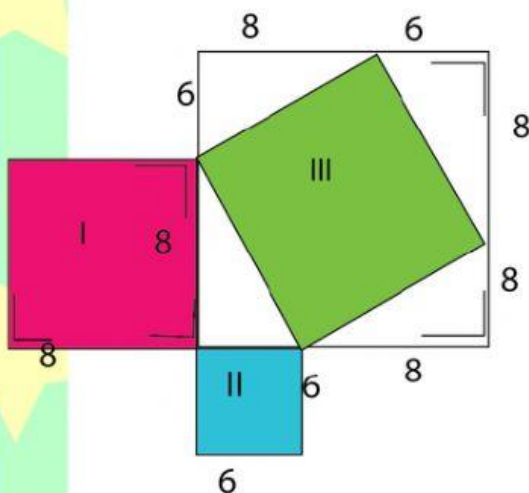
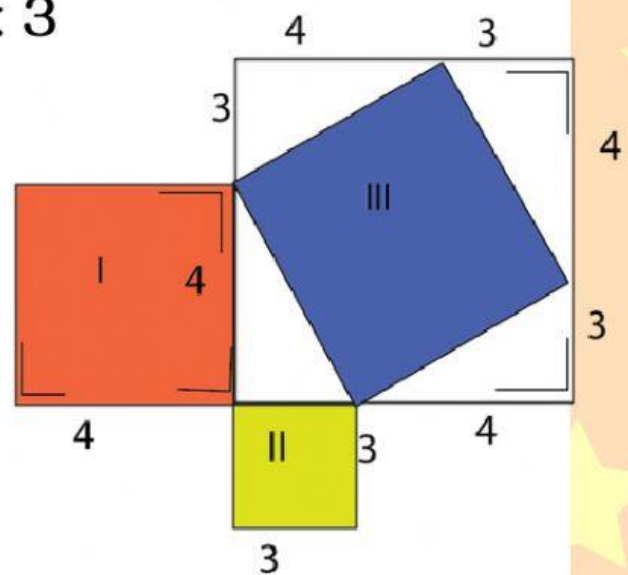
$$LII = 3 \times 3 = \dots$$

LIII = Luas persegi - 4 Luas segitiga

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

$$LIII = \dots - \dots$$

$$LIII = \dots$$



2. Berdasarkan gambar di samping

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

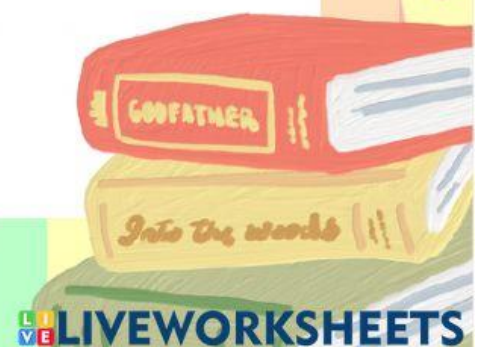
$$LII = \dots \times \dots = \dots$$

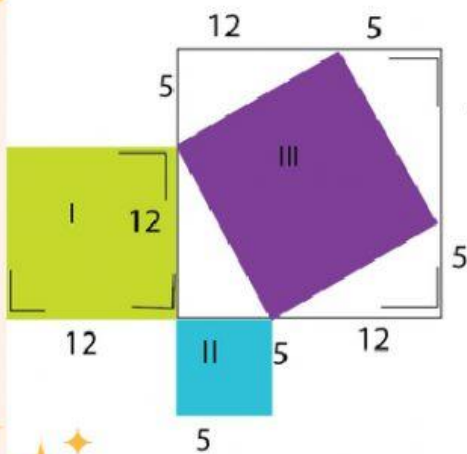
LIII = Luas persegi - 4 Luas segitiga

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

$$LIII = \dots - \dots$$

$$LIII = \dots$$





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 :

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

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

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

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

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

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

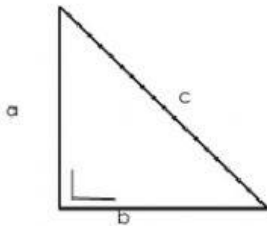
$$L III = \dots = \dots \times \dots = \dots$$

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

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

Catatan

Dari kegiatan di atas dapat disimpulkan bahwa :

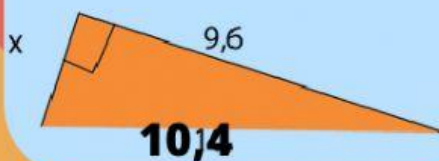
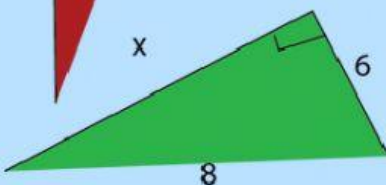
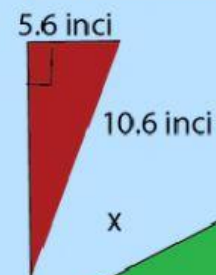
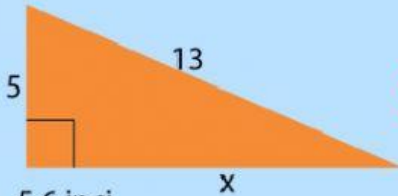
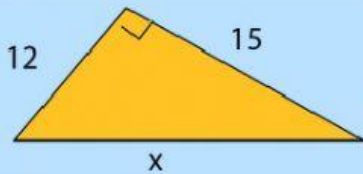


$$c^2 = \frac{a^2}{\dots} + \frac{b^2}{\dots}$$

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

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

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



$2\sqrt{7}$



4



19,20

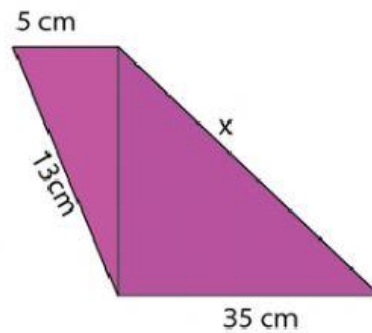
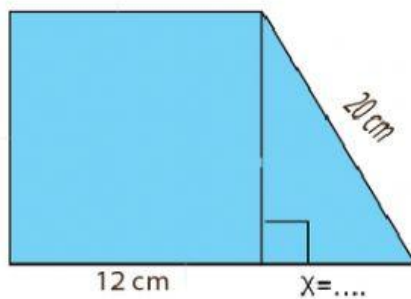


9

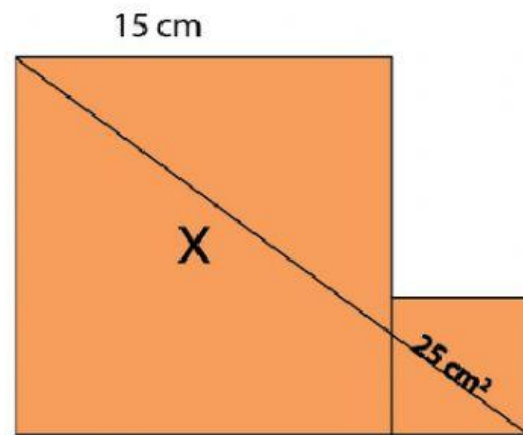


12

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 cm² 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

