

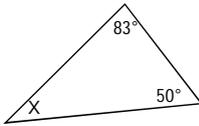
# **Eserciziario**

per il corso propedeutico di matematica per  
la maturità professionale MP2

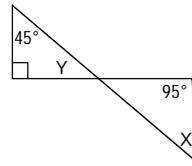
**Parte C: geometria**

Determina i seguenti angoli:

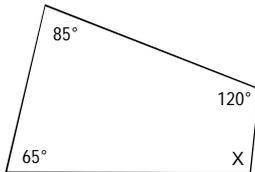
1. Determina l'angolo X



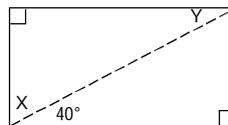
2. Determina l'angolo X e Y



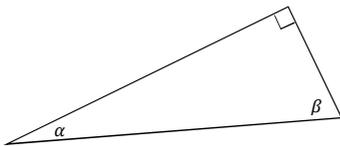
3. Determina l'angolo X



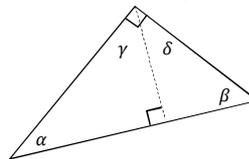
4. Determina l'angolo X e Y



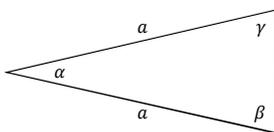
5. Determinare l'angolo  $\beta$  sapendo che  $\alpha = 25^\circ$   
 Determinare l'angolo  $\alpha$  sapendo che  $\beta = 40^\circ$



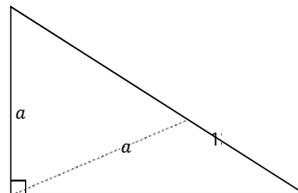
6. Determina  $\beta, \gamma$  e  $\delta$  sapendo che  $\alpha = 33^\circ$



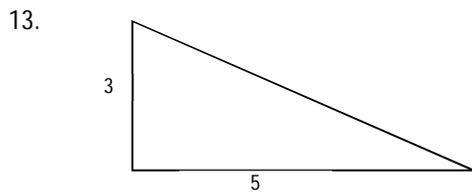
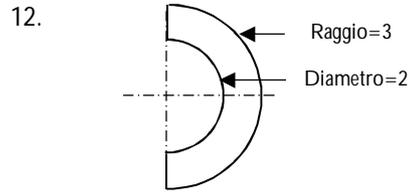
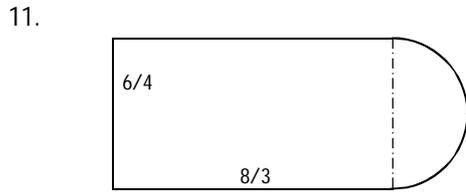
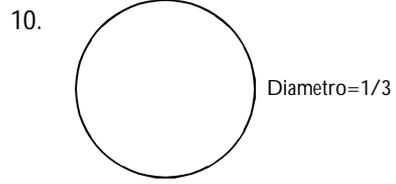
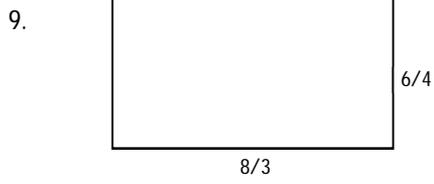
7. Determina  $\beta$  e  $\gamma$  sapendo che  $\alpha = 22^\circ$ :



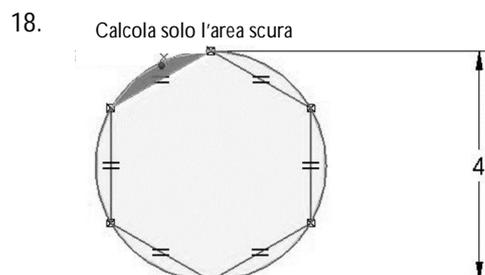
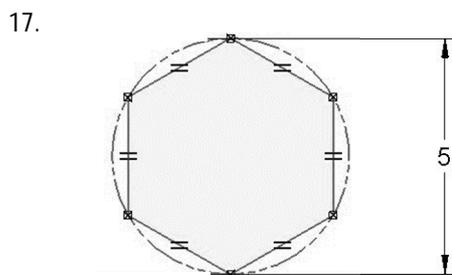
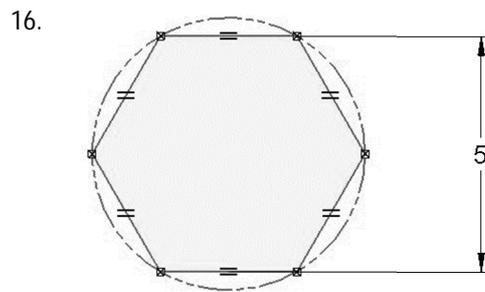
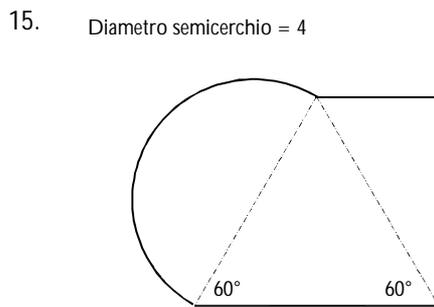
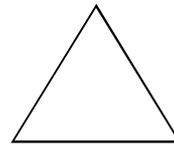
8. Determina gli angoli  $\alpha$  e  $\beta$ :



Calcola le seguenti aree e i seguenti perimetri:

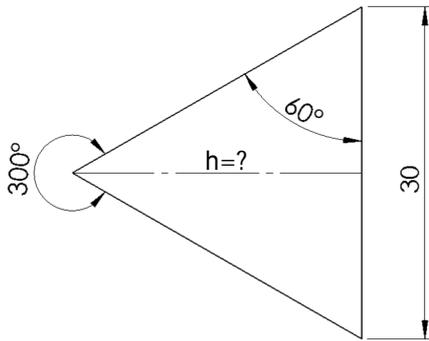


14. Del seguente triangolo equilatero si conosce il lato = 5

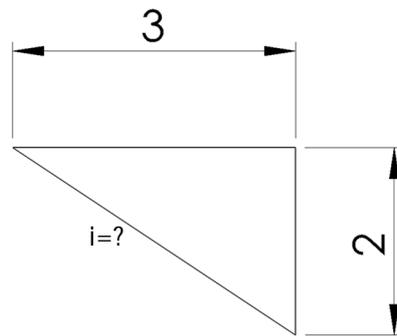


Determina il parametro mancante:

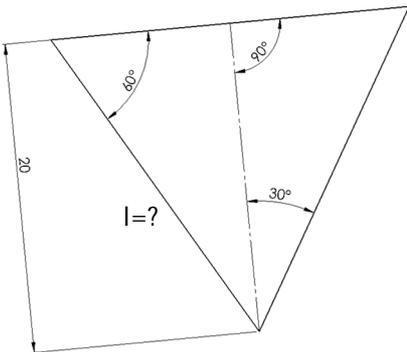
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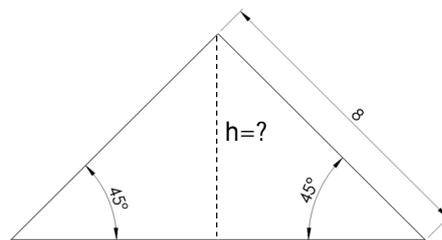
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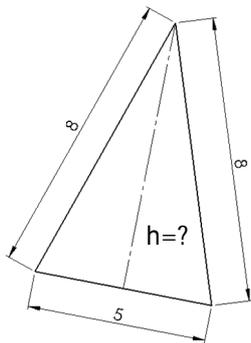
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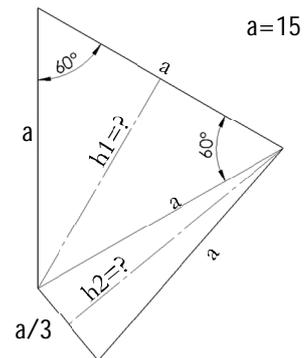
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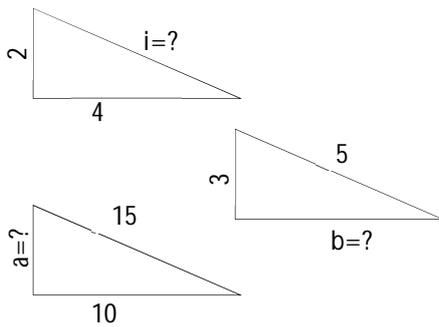
23.



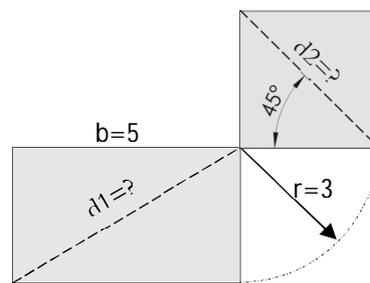
24.



25. §



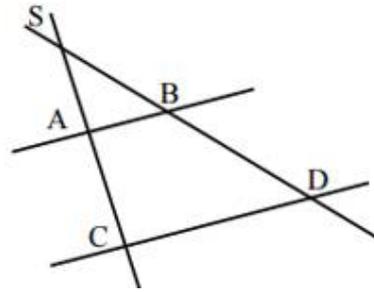
26.



Risolvi i seguenti esercizi:

27. Le rette  $d_{AB}$  e  $d_{CD}$  sono parallele.

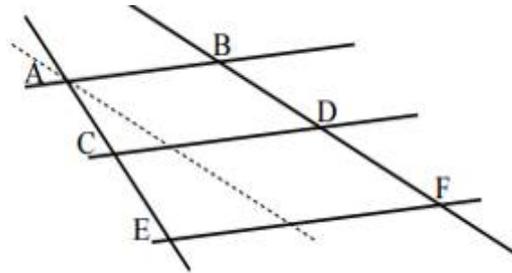
- a) Dati:  
 $\overline{BS} = 4m$ ,  $\overline{DS} = 8m$ ,  $\overline{AB} = 8m$ ,  
 $\overline{AS} = 9m$ ,  
 $\overline{AC} = 9m$ , calcolare  $\overline{CD}$ .



- b) Dati:  
 $\overline{AS} = 8cm$ ,  $\overline{BS} = 12cm$ ,  $\overline{DS} = 18cm$ ,  
 $\overline{AB} = 9cm$ , calcolare  $\overline{CS}$  e  $\overline{CD}$ .

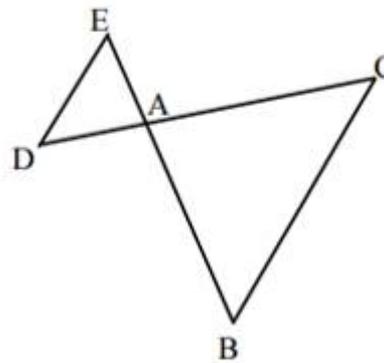
28. Le rette  $d_{AB}$ ,  $d_{CD}$  e  $d_{EF}$  sono parallele.

- $\overline{AB} = 126$ ,  $\overline{EF} = 210$ ,  $\overline{BF} = 98$ ,  
 $\overline{AC} = 20$ ,  $\overline{CE} = 8$   
 Calcolare  $\overline{BD}$  e  $\overline{CD}$



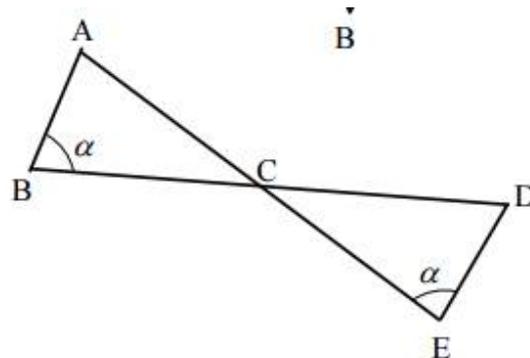
29. I segmenti  $[ED]$  e  $[BC]$  sono paralleli.

- $\overline{AD} = 32m$ ,  $\overline{AC} = 51m$ ,  $\overline{DE} = 38m$   
 e  $\overline{AB} = 45m$   
 Calcolare  $\overline{BC}$  e  $\overline{AE}$

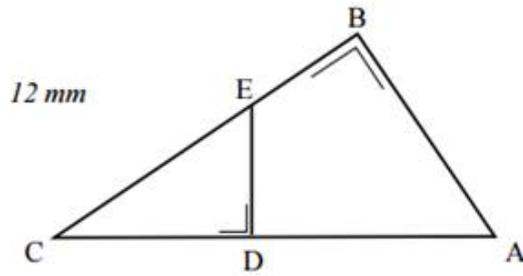


30. Dati:  $\overline{AC} = 5m$ ,  $\overline{AE} = 11m$ ,  $\overline{BC} = 4m$   
 e  $\overline{DE} = 12m$

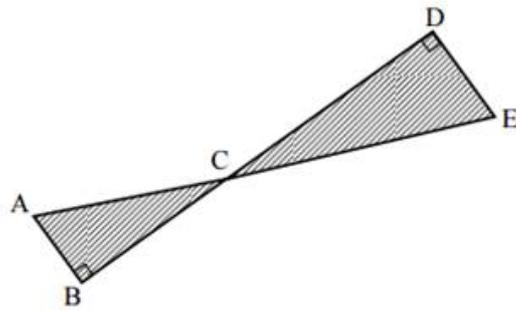
- Calcolare  $\overline{AB}$  e  $\overline{CD}$



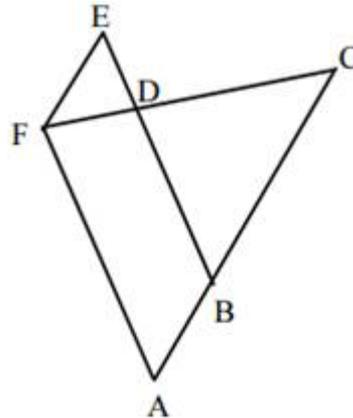
31. Dati:  $\overline{AB} = 8 \text{ mm}$ ,  $\overline{BE} = 7 \text{ mm}$  e  $\overline{BC} = 12 \text{ mm}$ .  
Calcolare  $\overline{AC}$ ,  $\overline{CD}$  e  $\overline{DE}$ .



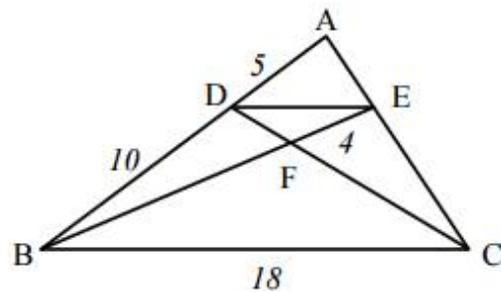
32. Dati:  $\overline{CE} = 111 \text{ km}$ ,  $\overline{BC} = 35 \text{ km}$ ,  $\overline{ED} = 36 \text{ km}$ .  
a) Calcolare  $\overline{AB}$  e  $\overline{BD}$   
b) Calcolare l'area della superficie ombreggiata.



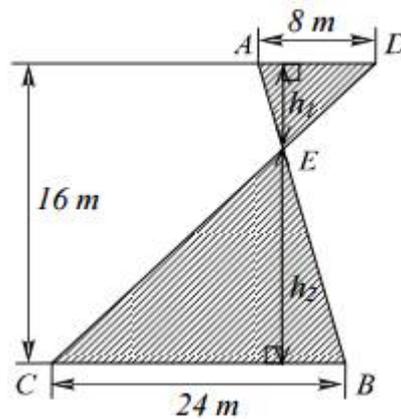
33. Dati:  $[AF] \parallel [BE]$  e  $[AC] \parallel [FE]$ ;  
 $\overline{BC} = 54 \text{ cm}$ ,  $\overline{CD} = 45 \text{ cm}$   
 $\overline{EF} = 18 \text{ cm}$ ,  $\overline{AF} = 100 \text{ cm}$   
Calcolare  $\overline{FD}$  e  $\overline{BD}$



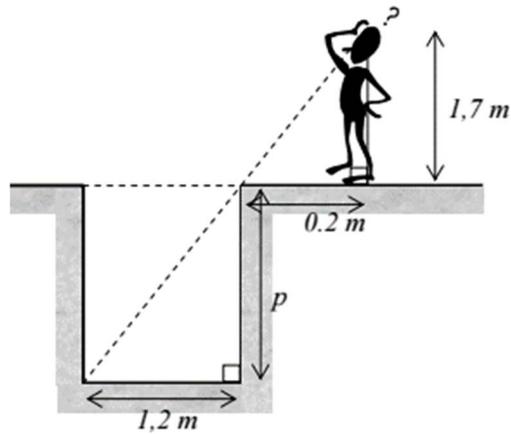
34. Dati:  $[BC] \parallel [DE]$   
Calcolare  $\overline{BF}$



35. Dati:  $[AD] \parallel [BC]$   
 Calcolare l'area ombreggiata.

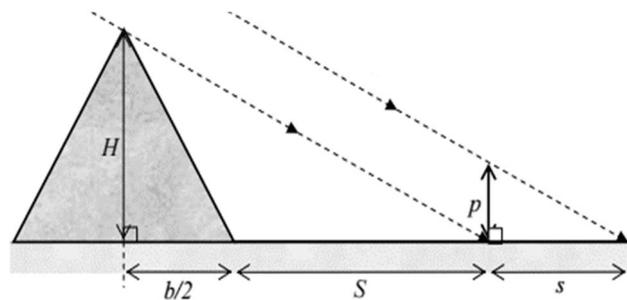


36. Calcolare la profondità del pozzo.



37. Per misurare l'altezza  $H$  della piramide di Cheope, Talete utilizza un bastone di lunghezza  $p = 2$  m, che pone verticalmente rispetto al suolo. Misura in seguito la base  $b = 230$  m della piramide, la lunghezza  $S = 300$  m della sua ombra e l'ombra del bastone  $s = 5,7$  m. Calcolare l'altezza  $H$  della piramide.

Raggi del sole (in prima ipotesi paralleli)



Risultati:

1.  $x = 47^\circ$

2.  $x = 40^\circ; y = 45^\circ$

3.  $x = 90^\circ$

4.  $x = 50^\circ; y = 40^\circ$

5.  $\alpha = 50^\circ; \beta = 65^\circ$

6.  $\beta = 57^\circ; \gamma = 57^\circ; \delta = 33^\circ$

7.  $x = 79^\circ$

8.  $\alpha = 40^\circ; \beta = 50^\circ$

9.  $p = \frac{25}{3}$   
 $A = 4$

10.  $p = \frac{\pi}{3}$   
 $A = \frac{\pi}{6^2}$

11.  $p = \frac{41}{6} + \frac{3}{4}\pi$   
 $A = 4 + \frac{9}{32}\pi$

12.  $p = 4 + 4\pi$   
 $A = 4\pi$

13.  $p = 8 + \sqrt{34}$   
 $A = \frac{15}{2}$

14.  $p = 15$   
 $A = \frac{25}{4}\sqrt{3}$

15.  $p = 6 + 4\pi + 2\sqrt{3}$   
 $A = 2\pi + 6\sqrt{3}$

16.  $p = \frac{30}{\sqrt{3}}$   
 $A = \frac{75}{2\sqrt{3}}$

17.  $A = \frac{75\sqrt{3}}{8}$   
 $p = 15$

18.  $p = 2 + \frac{2}{3}\pi$   
 $A = \frac{2}{3}\pi - \sqrt{3}$

19.  $h = \sqrt{675}$

20.  $i = \sqrt{13}$

21.  $l = 40/\sqrt{3}$

22.  $h = 4\sqrt{2}$

23.  $h = \sqrt{8^2 - \left(\frac{5}{2}\right)^2}$

24.  $h_1 = \frac{15}{2}\sqrt{3}$   
 $h_2 = \sqrt{15^2 - \left(\frac{5}{2}\right)^2}$

25.  $i = \sqrt{20}$   
 $b = \sqrt{16}$   
 $a = 5\sqrt{5}$

26.  $d_1 = \sqrt{34}$   
 $d_2 = 3\sqrt{2}$

27. a)  $CD = 16 m$   
b)  $CS = 12 cm$   
b)  $CD = 13.5 cm$   
 $AC = 14.42$

28.  $CD = 186$   
 $BD = 70$

29.  $BC = 60.56$   
 $AE = 28.24$

30.  $AB = 8$   
 $CD = 7.5$

31.  $CD = 4.16 mm$   
 $DE = 2.77 mm$

32.  $AB = 12$   
 $BD = 140$   
 $Area = 2100 km^2$

33.  $FD = 15$   
 $BD = 75$

34.  $BF = 12$

35.  $Area = 160 m^2$

36.  $Profondità = 10.2 m$

37.  $h = 146 m$