

SERIE 2 Théorème de Thalès

Calculatrice autorisée

Première version du théorème de Thalès

**Théorème de Thalès - I :**

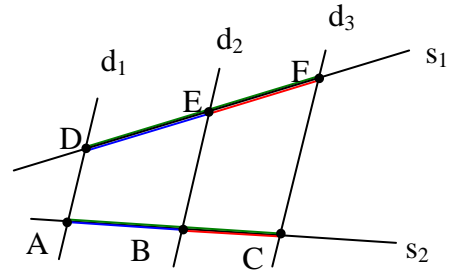
C'est le cas où l'on compare des segments de droites.

Comme sur le dessin ci-contre :

- soient deux droites sécantes  $s_1$  et  $s_2$
- soient  $d_1, d_2, d_3$  des droites parallèles :  $d_1 \parallel d_2 \parallel d_3$

Alors :

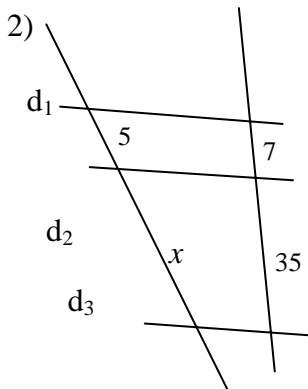
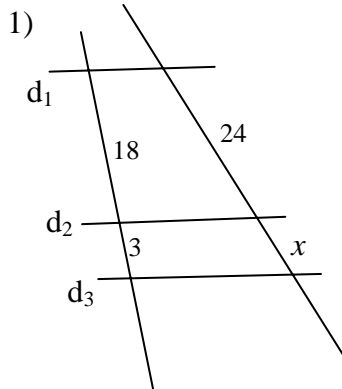
$$\frac{\overline{AB}}{\overline{DE}} = \frac{\overline{AC}}{\overline{DF}} = \frac{\overline{BC}}{\overline{EF}}$$



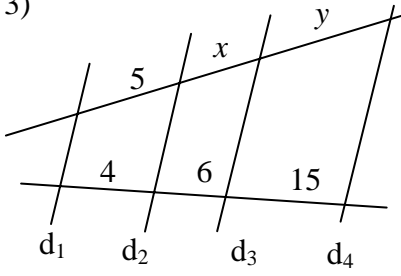
**Exercice 1 :**

On considère sur tous les **croquis** que  $d_1 \parallel d_2 \parallel d_3 \parallel d_4 \parallel d_5$ .  
Calculer dans chaque cas la longueur demandée.

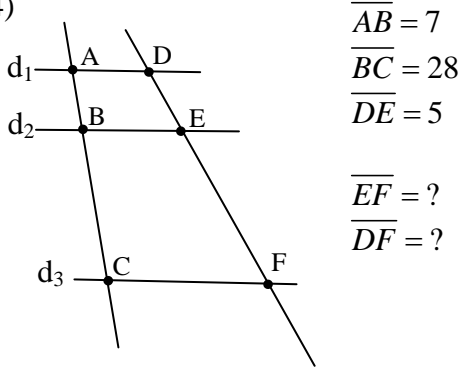
Unités : cm



3)

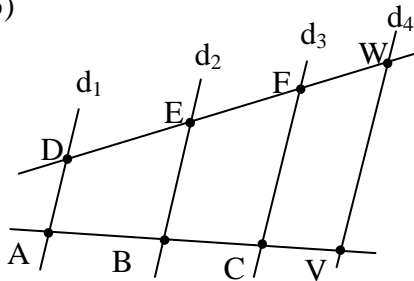


4)



$$\begin{aligned} \overline{AB} &= 7 \\ \overline{BC} &= 28 \\ \overline{DE} &= 5 \\ \overline{EF} &= ? \\ \overline{DF} &= ? \end{aligned}$$

5)



$$\begin{aligned} \overline{AB} &= 20 & \overline{DE} &= 18 & \overline{BC} &= ? \\ \overline{CV} &= 25 & \overline{EF} &= 24 & \overline{FW} &= ? \end{aligned}$$

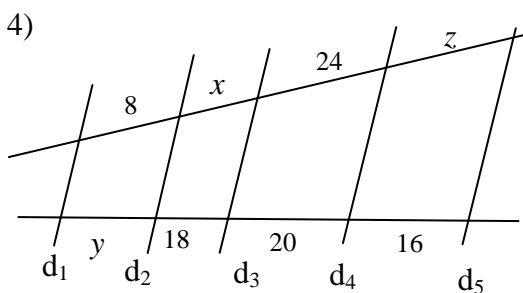
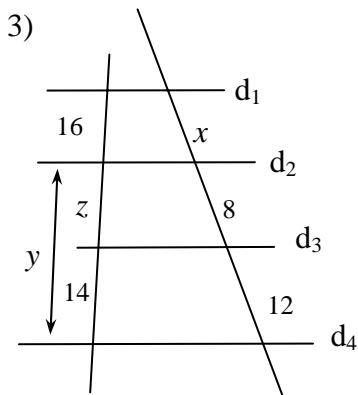
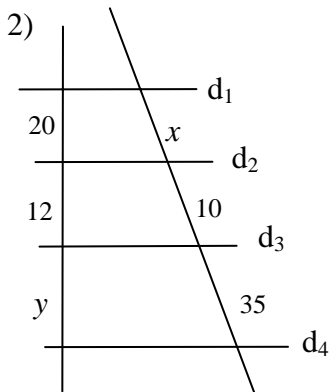
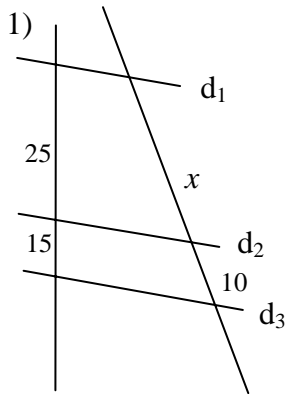
Réponses :

- 1)  $x = 4$  cm
- 2)  $x = 25$  cm
- 3)  $x = 7,5$  cm et  $y = 18,75$  cm
- 4)  $\overline{EF} = 20$  cm et  $\overline{DF} = 25$  cm
- 5)  $\overline{BC} = 26,67$  cm et  $\overline{FW} = 22,5$  cm

**Exercice 2 :**

On considère sur tous les **croquis** que  $d_1 \parallel d_2 \parallel d_3 \parallel d_4 \parallel d_5$ .  
Calculer dans chaque cas les longueurs demandées.

Unités : cm



**Réponses :**

1)  $x = 16,67$  cm

2)  $x = 16,67$  cm et  $y = 42$  cm

3)  $x = 13,71$  cm ;  $z = 9,33$  cm ; ( $y = 23,33$  cm)

4)  $x = 21,60$  cm ;  $y = 6,67$  cm ;  $z = 19,20$  cm