



fichas de Trabajo

MATEMÁTICA

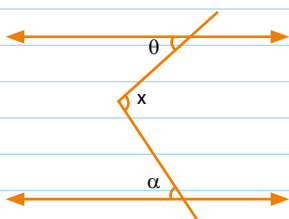
4^{to}

SECUNDARIA

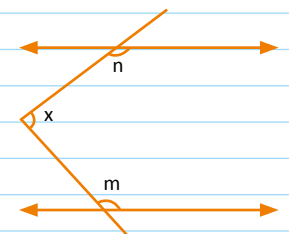
ÁNGULOS ENTRE PARALELOS

Propiedades

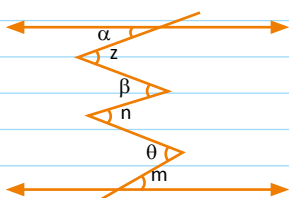
MÉTODO DEL SERRUCHO



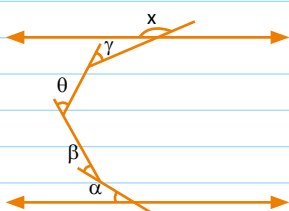
$$\alpha + \theta = x$$



$$x + m + n = 360^\circ$$



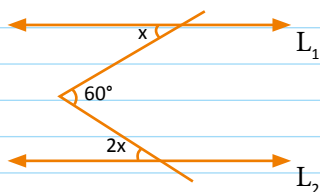
$$\alpha + \beta + \theta = m + n + z$$



$$\alpha + \beta + \theta + \gamma = x$$

Ejemplos:

1) Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



- a) 10° b) 20° c) 30°
d) 40° e) 45°

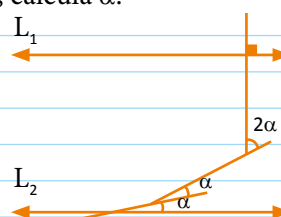
Resolución:

- Por el método del serrucho:

$$3x = 60^\circ$$

$$x = 20^\circ$$

2) Si $\overline{L_1} \parallel \overline{L_2}$, calcula α .



- a) $22,5^\circ$ b) 28° c) 30°
d) 32° e) 35°

Resolución:

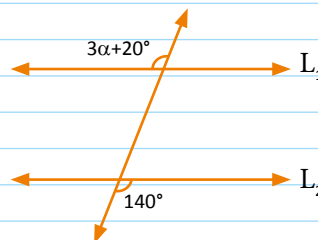
- Por la propiedad:

$$4\alpha = 90^\circ$$

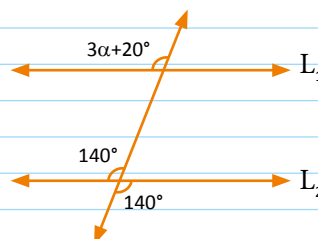
$$\alpha = 22,5^\circ$$

EJERCICIOS RESUELTOS

1) Encuentra el valor de " α " si: $\overline{L_1} \parallel \overline{L_2}$.



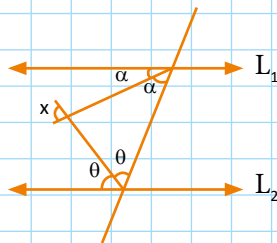
Resolución:



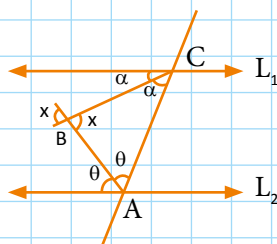
$(3\alpha + 20^\circ)$ y 140° son correspondientes, entonces:

$$\begin{aligned} 3\alpha + 20^\circ &= 140^\circ \\ 3\alpha &= 120^\circ \\ \alpha &= 40^\circ \end{aligned}$$

2) De la figura, halla el valor de "x". ($\overline{L_1} \parallel \overline{L_2}$)

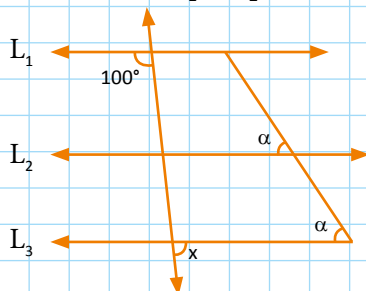


Resolución:

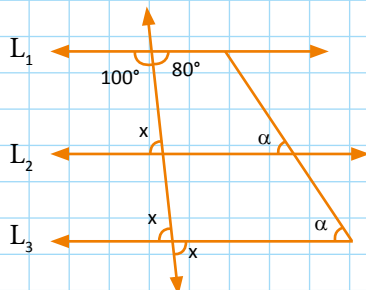


- $2\alpha + 2\theta = 180^\circ$
 $\alpha + \theta = 90^\circ$
- $\Delta ABC: \alpha + \theta + x = 180^\circ$
 $90^\circ + x = 180^\circ$
 $x = 90^\circ$

3) Halla el valor de "x" si $\overline{L_1} \parallel \overline{L_2}$.



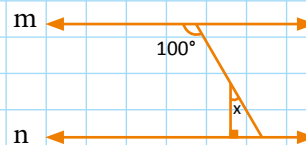
Resolución:



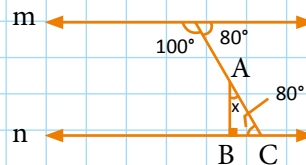
• Del gráfico: $\overline{L_1} \parallel \overline{L_2} \parallel \overline{L_3}$

• Entonces: $x = 80^\circ$
(áng. alternos internos)

4) Halla "x" sabiendo que $\overline{m} \parallel \overline{n}$.

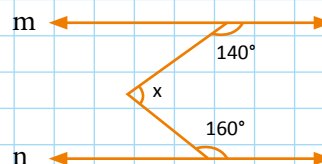


Resolución:

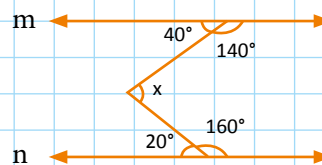


- Del gráfico:
 $m\angle ACB = 80^\circ$
- $\Delta ABC: x + 80^\circ = 90^\circ$
 $x = 10^\circ$

5) Según el gráfico calcula el valor de "x", sabiendo que $\overline{m} \parallel \overline{n}$.



Resolución:

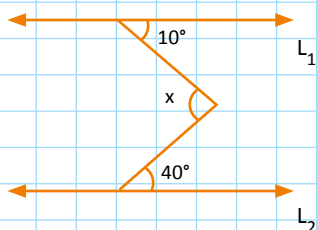


- Sabemos: $x = 40^\circ + 20^\circ$
 $x = 60^\circ$

Trabajando en Clase

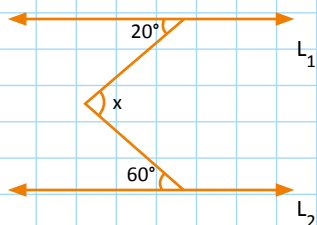
Nivel I

1. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



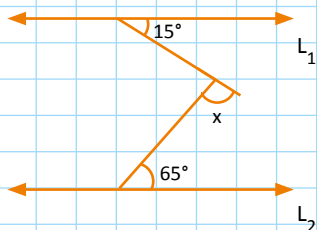
- a) 20° b) 30° c) 40°
d) 50° e) 60°

2. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



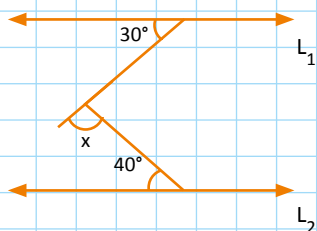
- a) 40° b) 50° c) 60°
d) 70° e) 80°

3. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



- a) 50° b) 70° c) 80°
d) 90° e) 100°

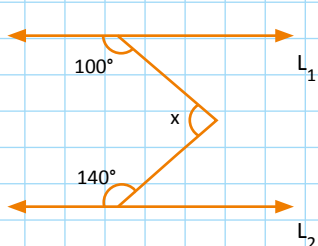
4. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



- a) 110° b) 100° c) 90°
d) 80° e) 70°

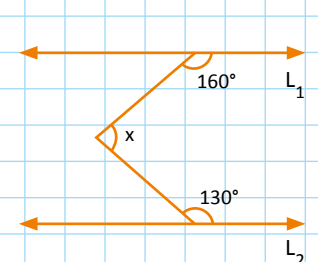
Nivel II

5. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



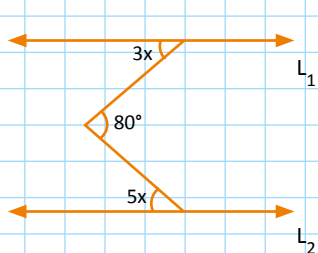
- a) 240° b) 180° c) 160°
d) 140° e) 120°

6. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



- a) 290° b) 200° c) 140°
d) 110° e) 70°

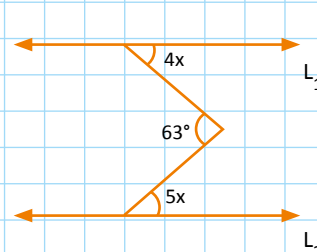
7. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



- a) 10° b) 20° c) 40°
d) 60° e) 80°

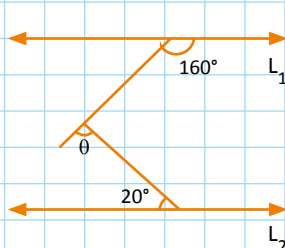
Nivel III

8. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



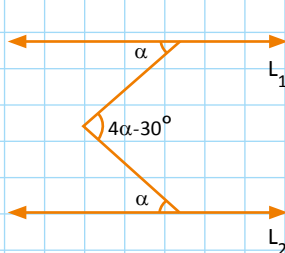
- a) 6° b) 7° c) 8°
d) 9° e) 10°

9. Halla θ si $\overline{L_1} \parallel \overline{L_2}$.



- a) 150° b) 120° c) 135°
d) 130° e) 140°

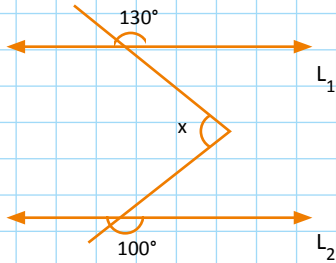
10. Halla α si $\overline{L_1} \parallel \overline{L_2}$.



- a) 15° b) 12° c) 10°
d) 18° e) 20°

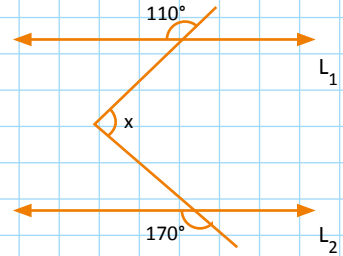
Tarea domiciliaria N° 1

1. Si $\overleftrightarrow{L_1} \parallel \overleftrightarrow{L_2}$ calcula x.



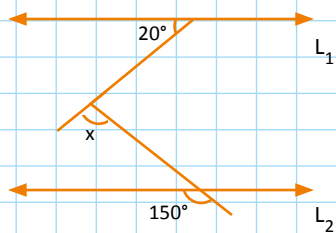
Rpta :

2. Si $\overleftrightarrow{L_1} \parallel \overleftrightarrow{L_2}$, calcula x.



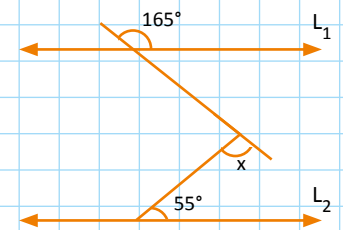
Rpta :

3. Si $\overleftrightarrow{L_1} \parallel \overleftrightarrow{L_2}$, calcula x.



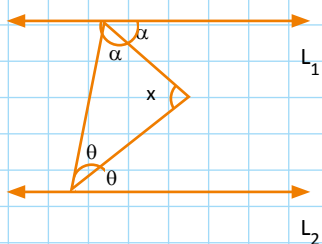
Rpta :

4. Si $\overleftrightarrow{L_1} \parallel \overleftrightarrow{L_2}$, calcula x.



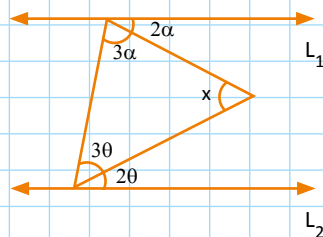
Rpta :

5. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



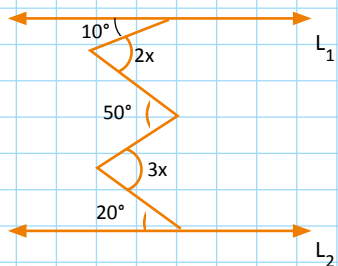
Rpta :

6. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



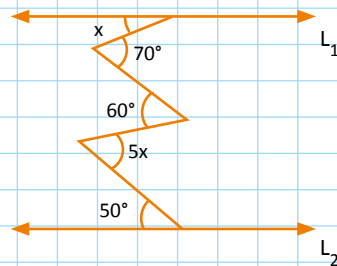
Rpta :

7. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



Rpta :

8. Si $\overline{L_1} \parallel \overline{L_2}$, calcula x.



Rpta :