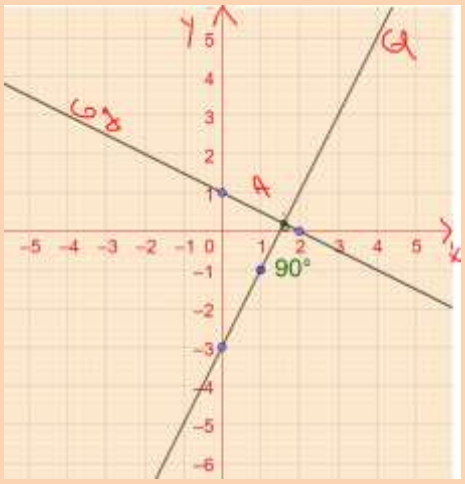
1) $f:\mathbb{R}\to\mathbb{R}$ $f(x)=2x-3$ $\quad g:\mathbb{R}\to\mathbb{R}$ $g(x)=-\frac{1}{2}\cdot x+1$ $\quad h:\mathbb{R}\to\mathbb{R}$ $h(x)=2x+3$ $\Rightarrow$ a) $m(\widehat{G_f, G_g})$ b) $m(\widehat{G_f, G_h})$

În general: $f:\mathbb{R}\to\mathbb{R}$ $f(x)=ax+b$ $\quad g:\mathbb{R}\to\mathbb{R}$ $g(x)=mx+n$ $\Rightarrow$ $G_f \parallel G_g \Leftrightarrow a=m$; $G_f \perp G_g \Leftrightarrow a\cdot m=-1$

Verificăm: $2\cdot\left(-\frac{1}{2}\right)=-2\cdot\frac{1}{2}=-1 \Rightarrow G_f \perp G_g \Rightarrow m(\widehat{G_f, G_g})=90^\circ$

x	0	1
$f(x)$	-3	-1

x	0	2
$g(x)$	1	0



Determinăm $G_f \cap G_g=\{A(m,n)\} \Rightarrow$

$A(m,n)\in G_f \Rightarrow f(m)=n$

$A(n,n)\in G_g \Rightarrow g(m)=n$ $\Rightarrow f(m)=g(m) \Rightarrow 2m-3=-\frac{1}{2}m+1 \mid \cdot 2$

$4m-6=-m+2 \Rightarrow 4m+m=2+6 \Rightarrow 5m=8 \Rightarrow m=\frac{8}{5}$

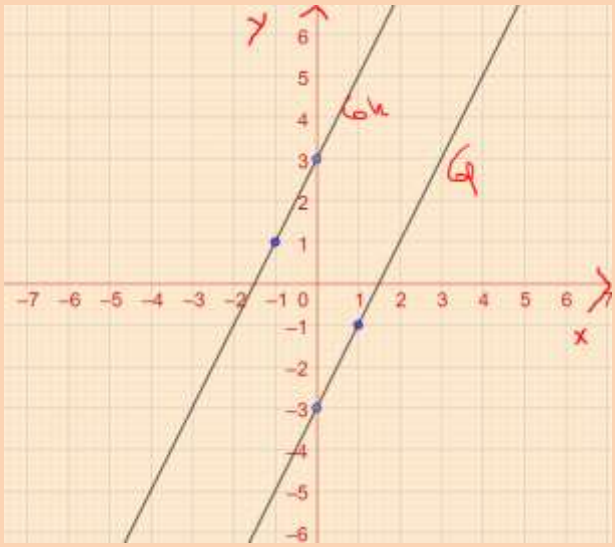
$n=f(m) \Rightarrow n=f\left(\frac{8}{5}\right) \Rightarrow n=2\cdot\frac{8}{5}-\frac{3}{1}=\frac{16-15}{5}=\frac{1}{5}$

$A\left(\frac{8}{5}, \frac{1}{5}\right)$

b) $f:\mathbb{R}\to\mathbb{R}$ $f(x)=2x-3$ $\quad h:\mathbb{R}\to\mathbb{R}$ $h(x)=2x+3$ $\Rightarrow 2=2 \Rightarrow G_f \parallel G_h \Rightarrow m(\widehat{G_f, G_h})=0^\circ$

Probă:

x	0	-1
$h(x)$	3	1



Fie $\{A(m,n)\}=G_f \cap G_h \Rightarrow$

$\Rightarrow A(m,n)\in G_h \Rightarrow h(m)=n \Rightarrow 2m+3=n$

$A(m,n)\in G_f \Rightarrow f(m)=n \Rightarrow 2m-3=n$ $\Rightarrow$

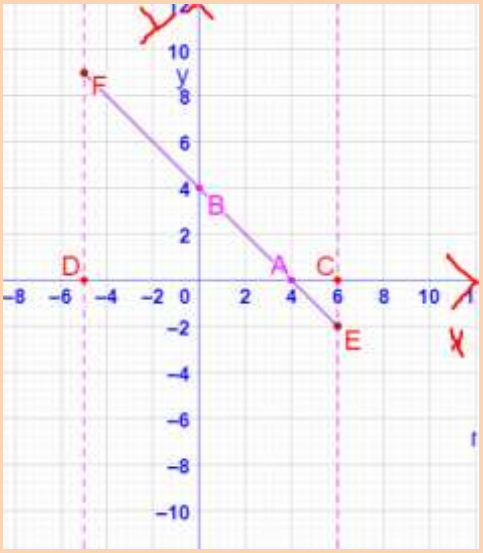
$2m+3=2m-3 \Rightarrow 2m-2m=-3-3 \Rightarrow$

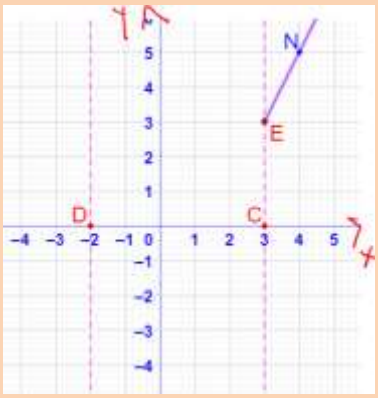
$0\cdot m=-6$ (imposibil)

$(\nexists) A(m,n) \Rightarrow G_f \cap G_g=\emptyset \Rightarrow G_f \parallel G_g$

2) Reprezentați grafic funcțiile: $f:[-5,6]\to\mathbb{R}$ $f(x)=-x+4$

x	0	4
$f(x)$	4	0



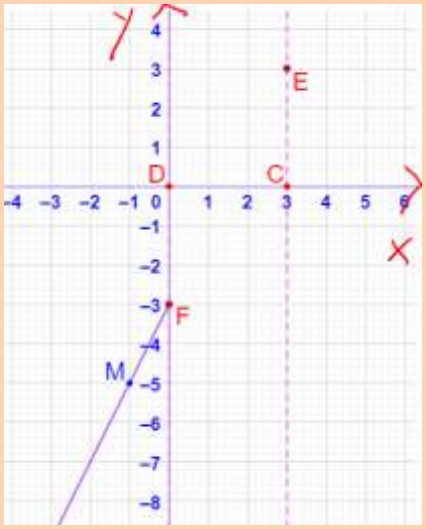


$f:[3,\infty)\to\mathbb{R}$, $f(x)=2x-3$

x	4	5
$f(x)$	5	7

$f:(-\infty,0)\to\mathbb{R}$, $f(x)=2x-3$

x	-1	1
$f(x)$	-5	-7



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