$$
\begin{gathered}
11-6-13 \\
S^{=-G e o} \\
y-y_{1}=m\left(x-x_{1}\right)
\end{gathered}
$$

Give the equation in SIF that goes through ( 1,8 ) and is parallel to $y=2 x-5$.

$$
m=2
$$

$$
\begin{aligned}
& y-y_{1}=m\left(x-x_{1}\right) \quad \text { slope is } 2 \\
& y-8=2(x-1) \\
& y-8=2 x-2 \\
& \frac{+8}{+8}=2 x+6
\end{aligned}
$$



Give me the equation in SIF that goes through $(2,6)$ and is perpendicular $(\perp)$ to

$$
\begin{gathered}
y=-\frac{1}{2} x+7 \\
m=\frac{1}{2} \quad y-y_{1}=m\left(x-x_{1}\right) \\
\therefore m=2 \quad y-6=2(x-2) \\
\quad y-6=2 x-4 \\
\frac{+6}{y}=2 x+2
\end{gathered}
$$

Give equation in SIF that
goes through ( $\begin{aligned} & 1,7 \text { ) } \\ & x_{1}, y_{1}\end{aligned}$
and is perpendicular to $y=\frac{1}{3} x+4$

$$
\begin{aligned}
y-y_{1} & =m\left(x-x_{1}\right) \quad \therefore \pm m=-3 \\
y-7 & =-3(x-1) \\
y-7 & =-3 x+3 \\
+7 & +7 \\
y & =-3 x+10
\end{aligned}
$$

$$
\begin{aligned}
& 11-6-13 \\
& H \text { Geo }
\end{aligned}
$$



$$
y-y_{1}=m\left(x-x_{1}\right)
$$

Give the equation in slope intercept form (SIF) that goes through $(2,4)$ and is perpendicular (1) to $y=2 x-9$.
$\therefore D_{m=2}^{2} \quad y-y_{1}=m\left(x-x_{1}\right)$
$y-4=-\frac{1}{2}(x-2)$
$\begin{array}{r}\begin{array}{r}y-4=-\frac{1}{2} x+1 \\ +4\end{array} \\ \hline y=-\frac{1}{2} x+5\end{array}$

Give the equation in SIR
that goes through ( $-3,70$ )
and is parallel to $y=10 x-1$.

$$
\begin{aligned}
& y-y_{1}=m\left(x-x_{1}\right) \\
& y-70=10(x+3) \\
& y-70=10 x+30 \\
& +70+70 \\
& \begin{array}{c}
v=10 x+100
\end{array}
\end{aligned}
$$

Give the equation that is $\perp$ to $y=\frac{1}{4} x+2$ and goes through ( 1.7 ).

$$
m=\frac{1}{4}
$$

$$
\begin{aligned}
& y-y_{1}=m\left(x-x_{1}\right) \therefore \perp m=-4 \\
& y-7=-4(x-1) \\
& y-7=-4 x+4 \\
& +7+7 \\
& \hline y=-4 x+11
\end{aligned}
$$

Give the equation in SIF that goes through $(2,1)$ and $(4,11)$.

$$
\begin{aligned}
& m=\frac{\Delta y}{\Delta x}=\frac{11-1}{4-2}=\frac{10}{2}=5 \\
& y-y_{1}=m\left(x-x_{1}\right) \\
& y-1=5(x-2) \\
& y-1=5 x-10 \\
& +1 \begin{array}{r}
+1 \\
+1
\end{array} \\
& y=5 x-9
\end{aligned}
$$

