$$
\begin{aligned}
& 11-11-13 \\
& 3^{12} T \cdot i,
\end{aligned}
$$

Standord form

$$
A x+B y=C \quad 2 x+5 y=6
$$

(1) $A, B, \# C$ must be Integers
(2) $A$ must be + . (whole t)
(3) $A, B, E \subset$ most have gef of 1 .

$$
\left.\begin{array}{l}
x+2 y=35 \\
2 x+4 y=6 \\
5 x+16 y=15
\end{array}\right)
$$

Let's put these in stend..d furm.
(1)

$$
\begin{gathered}
-1[-2 x+y=7] \\
2 x-y=-7
\end{gathered}
$$

(2)

$$
\begin{aligned}
3\left[\frac{2}{3} x+5 y\right. & =2] \\
2 x+15 y & =6
\end{aligned}
$$

(3) $10\left[\frac{1}{2} x+\frac{2}{5} y=7\right]$

$$
5 x+4 y=70
$$

$$
\begin{aligned}
& \frac{10}{1} \cdot \frac{1}{2}=\frac{10}{2}=5 \\
& \frac{10}{1} \cdot \frac{2}{5}=\frac{20}{5}=4
\end{aligned}
$$

(4) $-12\left[-\frac{3}{4} x+\frac{1}{3} y=1\right]$

$$
-\frac{12}{1} \cdot \cdot \frac{-3}{4}=\frac{3}{4}=9
$$

$$
9 x-4 y=-12
$$

$\frac{-12}{1} \cdot \frac{1}{3}=\frac{-n}{3^{3}-4}$

$$
\begin{gathered}
\text { (5) } \begin{aligned}
2 y=x+7 \\
-x-x
\end{aligned} \\
-1[-x+2 y=7] \\
x-2 y=-7
\end{gathered}
$$

(1) Give the equation in stander
form that goes through
$(1, y)$ and is parallel to

$$
y=\frac{1}{2} x+8
$$

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

$$
y-7=\frac{1}{2}(x-1)
$$

$$
\begin{array}{rr}
y-7= & \frac{1}{2} x-\frac{1}{2} \\
+7 & +7 \\
\hline
\end{array}
$$

$$
y=\frac{1}{2} x+6 \frac{1}{2}
$$

$$
\frac{-\frac{1}{2} x-\frac{1}{2} x}{-2\left[-\frac{1}{2} x+y=6 \frac{1}{2}\right]}
$$

$$
x-2 y=-13
$$

Give equation in staederd form
thur has a slope of $\frac{2}{3}$ and
goes through $(6,12)$

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

$$
y-12=\frac{2}{3}(x-6) \quad \frac{2}{3} \cdot \frac{6}{1}=\frac{12}{3}=4
$$

$$
y-12=\frac{2}{3} x-4
$$

$$
\frac{+12}{y=\frac{2}{3} x+8}
$$

$$
-\frac{2}{3} x-\frac{2}{3} x
$$

$$
-3\left[-\frac{2}{3} x+y=8\right]
$$

$$
2 x-3 y=-24
$$

Give the equation in storied for
that goes through $(2,1)$ and
is $\perp$ to $y=\frac{1}{3} x-5$.

$$
y-y_{1}=m\left(x-x_{0}\right)
$$

$$
y-1=-3(x-2)
$$

$$
\begin{array}{r}
y-1=-3 x+6 \\
+1 \quad+1 \\
\hline y=-3 x+7 \\
+3 x+3 x
\end{array}
$$

$$
\frac{+3 x+3 x}{3 x+y=7}
$$

11-11-13

$$
4^{n \pi} T r i g
$$

Standard form

$$
A x+B y=C \quad 2 x+7 y=4
$$

3 Rules
(1) $A, B, C$ must be Integers (No fractions)
(2) A must be positive (whule \#)
(3) $A, B, C$ most have a gcf of 1 .
(e.9. $2 x+6 y=10$ wosid simpl.qy to

$$
x+3 y=5
$$

Change to $s t$ andord form:
(1)

$$
\begin{array}{r}
-1[-2 x+y=7] \\
2 x-y=-7
\end{array}
$$

(2)

$$
\begin{aligned}
4\left[\frac{1}{4} x+y\right. & =5] \\
x+4 y & =20
\end{aligned}
$$

(3)

$$
\begin{array}{cc}
3\left[\frac{2}{3} x+\frac{1}{3} y=5\right] & \frac{3}{1} \cdot \frac{2}{3}=\frac{6}{3}=2 \\
2 x+y=15 & \frac{3}{1} \cdot \frac{1}{3}=\frac{3}{3}=1
\end{array}
$$

(4)

$$
\begin{aligned}
6\left[\frac{1}{2} x+\frac{2}{3} y\right. & =1] \\
3 x+4 y & =6
\end{aligned}
$$

$$
\begin{aligned}
& \text { (5) } \begin{aligned}
y=2 x+4 \\
-2 x-2 x
\end{aligned} \\
& -1(-2 x+y=4] \\
& 2 x-y=-4
\end{aligned}
$$

Give the equation in Staedad
form that goes through
$(2,4)$ and is parallelto

$$
\begin{aligned}
& y=6 x-1 \\
& y-y_{1}=m\left(x-x_{1}\right) \\
& y-4=6(x-2) \\
& y-4=6 x-12 \\
&+4+4 \\
& y=6 x-8 \\
&-6 x+-6 x \\
&-1[-6 x+y=-8] \\
& 6 x-y=8
\end{aligned}
$$

Give the equation in standard form that is $\perp$ to

$$
\begin{gathered}
y=2 x+1 \text { and goes through } \\
\begin{array}{c}
(4,6) . \quad+m=-\frac{1}{2} \\
y-y_{1}=m\left(x-x_{1}\right) \\
y-6=-\frac{1}{2}(x-4) \\
y-6=-\frac{1}{2} x+2 \\
+6 \\
y=-\frac{1}{2} x+8 \\
+\frac{1}{2} x+\frac{1}{2} x \\
2\left[\frac{1}{2} x+y=8\right]
\end{array} \\
x+2 y=16
\end{gathered}
$$

