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Analyze the following systems and determine the solution for each system. Justify your steps for each system.

| $\begin{aligned} & x+y=3 \\ & x+3 y=9 \end{aligned}$ | $\begin{aligned} & 2 x-4 y=-8 \\ & 2 x-5 y=-10 \end{aligned}$ |
| :---: | :---: |
| $\begin{aligned} & 3 x-4 y=6 \\ & x-4 y=2 \end{aligned}$ | $x-y=7$ <br> $x+y=9$ |
| $\begin{aligned} & 5 x+y=-1 \\ & 10 x+2 y=-2 \end{aligned}$ | $\begin{aligned} & 2 x+4 y=12 \\ & 2 x-y=22 \end{aligned}$ |
| $\begin{aligned} & -2 y+x=4 \\ & -3 y+x=6 \end{aligned}$ | $\begin{aligned} & 10 x+3 y=13 \\ & 10 x-y=9 \end{aligned}$ |
| $\begin{aligned} & 4 y-x=0 \\ & 3 y-x=0 \end{aligned}$ | $\begin{aligned} & 5 x+4 y=14 \\ & 3 x+4 y=10 \end{aligned}$ |


| $x+y=3$$x+3 y=9$ |  | $\begin{aligned} & 2 x-4 y=-8 \\ & 2 x-5 y=-10 \end{aligned}$ | $(0,2)$ |
| :---: | :---: | :---: | :---: |
|  | $(0,3)$ |  |  |
| $3 x-4 y=6$ $x-4 y=2$ | $(2,0)$ | $\begin{aligned} & x-y=7 \\ & x+y=9 \end{aligned}$ | $(8,1)$ |
| $5 x+y=-1$ $10 x+2 y=-2$ | (All real \#s) | $\begin{aligned} & 2 x+4 y=12 \\ & 2 x-y=22 \end{aligned}$ | $(10,-2)$ |
| $\begin{aligned} & -2 y+x=4 \\ & -3 y+x=6 \end{aligned}$ | $(0,-2)$ | $\begin{aligned} & 10 x+3 y=13 \\ & 10 x-y=9 \end{aligned}$ | $(1,1)$ |
| $\begin{aligned} & 4 y-x=0 \\ & 3 y-x=0 \end{aligned}$ | $(0,0)$ | $5 x+4 y=14$ $3 x+4 y=10$ | $(2,1)$ |

