3. $500=10+10y$

$\Rightarrow x+y=50$

$10(1+t)x+10y=500$

$y=50-(1+t)x$

$4x+5y=250$

$x+y=40$

$\begin{cases} 10(x+10)+10y=500 \ (x\geq 10) \\ 10y=500 \ (x<10) \end{cases}$

$\begin{cases} 10x+10y=500 \ (x\leq 30) \\ 10\times 30+12(x-30)+10y=500 \ (x\geq 30) \end{cases}$

$\begin{cases} x+y=70 \ (x\geq 30) \\ 10x+10y=500 \ (x\leq 30) \end{cases}$