2. (i)

$x = t + 1 \Rightarrow x - 1 = t$

$y = t - 5 = (x - 1) - 5 = x - 6$

$\Rightarrow x - y - 6 = 0$

(ii)

$x = t - 1 \Rightarrow x + 1 = t$

$y = 2t + 4 = 2(x + 1) + 4 = 2x + 6$

$\Rightarrow 2x - y + 6 = 0$

(iii)

$x = 2t + 1 \Rightarrow x - 1 = 2t \Rightarrow \frac{x-1}{2} = t$

$y = 4t - 3 = 4\left(\frac{x-1}{2}\right) - 3 = \frac{4x-4}{2} - 3 = 2x - 2 - 3$

$\Rightarrow 2x - y - 5 = 0$

(iv)

$$x=\frac{t+3}{t+2}\Rightarrow x(t+2)=t+3$$

$$xt+2x=t+3\Rightarrow xt-t=3-2x$$

$$t(x-1)=3-2x\Rightarrow t=\frac{(3-2x)}{(x-1)}$$

$$y=\frac{2t-5}{t+2}\Rightarrow y=\frac{2\dfrac{(3-2x)}{(x-1)}-5}{\dfrac{(3-2x)}{(x-1)}+2}$$

$$y=\frac{\dfrac{2(3-2x)-5(x-1)}{\cancel{(x-1)}}}{\dfrac{(3-2x)+2(x-1)}{\cancel{(x-1)}}}\Rightarrow y=\frac{2(3-2x)-5(x-1)}{(3-2x)+2(x-1)}$$

$$y=\frac{6-4x-5x+5}{3-2x+2x-2}\Rightarrow y=\frac{11-x}{1}\Rightarrow x+y-11=0$$

(v)

$$x=\frac{3t+5}{t-3}\Rightarrow x(t-3)=3t+5$$

$$\Rightarrow xt-3x=3t+5\Rightarrow xt-3t=5+3x$$

$$\Rightarrow t(x-3)=5+3x\Rightarrow t=\frac{5+3x}{x-3}$$

$$y=\frac{t-2}{t-3}=\frac{\left(\dfrac{5+3x}{x-3}\right)-2}{\left(\dfrac{5+3x}{x-3}\right)-3}=\left[\frac{\left(\dfrac{5+3x}{x-3}\right)-2}{\left(\dfrac{5+3x}{x-3}\right)-3}\right]\times\left[\frac{x-3}{x-3}\right]$$

$$y=\frac{5+3x-2x+6}{5+3x-3x+9}=\frac{11+x}{14}$$

$$\Rightarrow 14y=11+x\Rightarrow x-14y+11=0$$