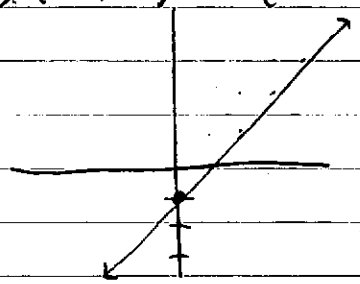
1) $x = 1 + t \quad y = t$

$y = x - 1 \quad t: (-\infty, \infty)$

D: $(-\infty, \infty)$ R: $(-\infty, \infty)$

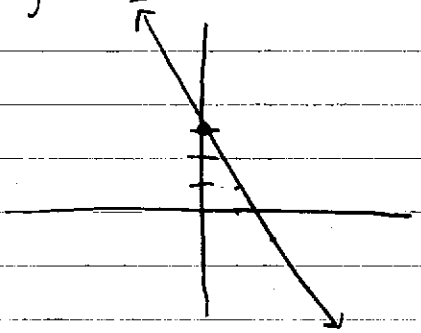


2) $x = 2t - 3 \quad y = 9 - 4t \quad t: (-\infty, \infty)$

$x + 3 = 2t$ D: $(-\infty, \infty)$ R: $(-\infty, \infty)$

$y = 9 - 2(x + 3)$

$y = -2x + 3$



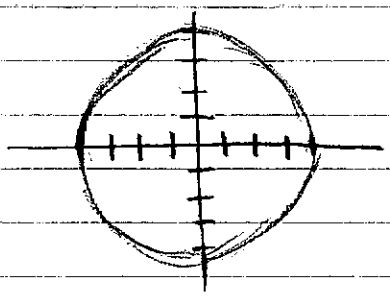
3) $x = 4\sin t \quad y = 4\cos t \quad t: (-\infty, \infty)$

D: $[-4, 4]$ R: $[-4, 4]$

$\frac{x}{4} = \sin t \quad \frac{y}{4} = \cos t$

$\cos^2 t + \sin^2 t = 1$

$\left(\frac{x}{4}\right)^2 + \left(\frac{y}{4}\right)^2 = 1$

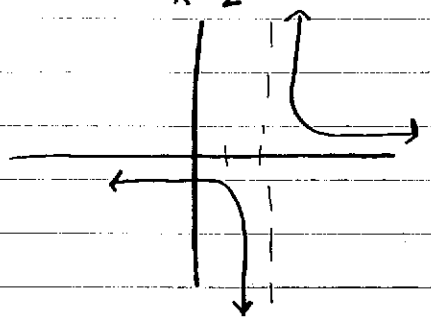


4) $x = t + 2 \quad y = \frac{2}{t} \quad t: (-\infty, 0) (0, \infty)$

D: $(-\infty, \infty)$ R: $(-\infty, 0) (0, \infty)$

$x - 2 = t$

$y = \frac{2}{x - 2}$



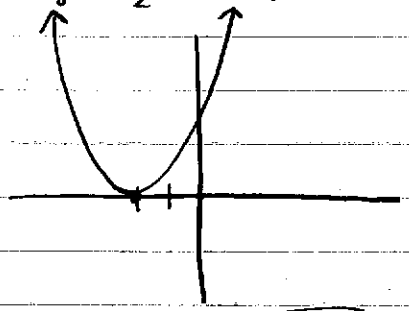
5) $x = 4t - 2 \quad y = 8t^2 \quad t: (-\infty, \infty)$

D: $(-\infty, \infty)$ R: $(-\infty, \infty)$

$\frac{x + 2}{4} = t \quad y = 8\left(\left(\frac{x + 2}{4}\right)^2\right)$

$8\left(\frac{1}{16}(x + 2)^2\right)$

$y = \frac{1}{2}(x + 2)^2$

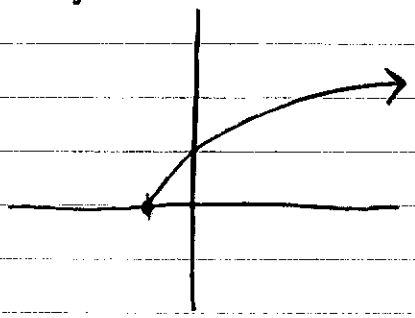


6) $x = t - 3 \quad y = \sqrt{t - 2} \quad t: (2, \infty)$

D: $[-1, \infty)$ R: $[0, \infty)$

$x + 3 = t \quad y = \sqrt{x + 3 - 2}$

$y = \sqrt{x + 1}$



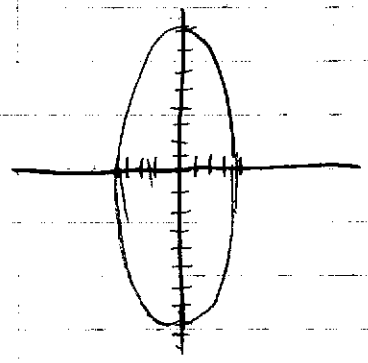
7) $x = 4\cos t \quad y = 8\sin t \quad t:[-\infty,\infty]$

D:[-4,4] R:[-8,8]

$\frac{x}{4} = \cos t \quad \frac{y}{8} = \sin t$

$\cos^2 t + \sin^2 t = 1$

$\frac{x^2}{16} + \frac{y^2}{64} = 1$

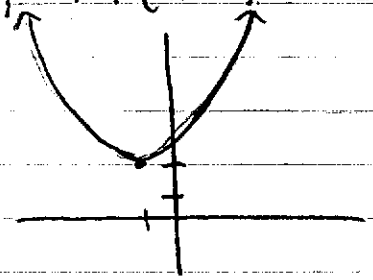


9) $x = 3t - 1 \quad y = t^2 + 2 \quad t:(-\infty,\infty)$

D:$(-\infty,\infty)$ R:$[2,\infty)$

$\frac{1}{3}(x+1) = t \quad y = (\frac{1}{3}(x+1))^2 + 2$

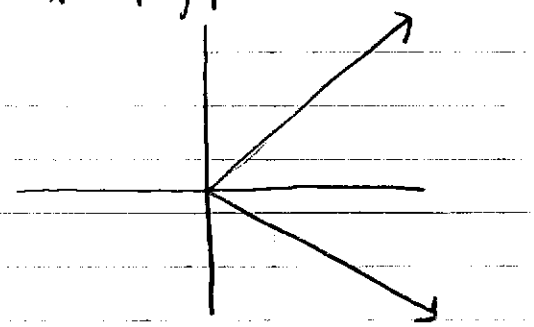
$y = \frac{1}{9}(x+1)^2 + 2$



10) $x = |t| \quad y = t \quad t:(-\infty,\infty)$

D:$(0,\infty)$ R:$(-\infty,\infty)$

$x = |y|$



8) $x = 5 - 3t \quad y = 2 + t \quad t:(-\infty,\infty)$

D:$(-\infty,\infty)$ R:$(-\infty,\infty)$

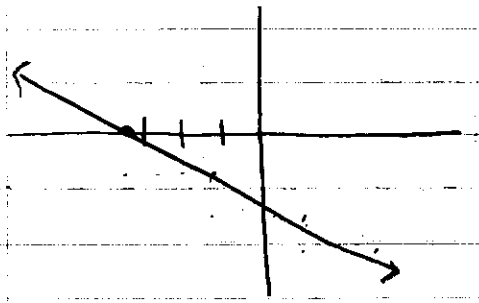
$y - 2 = t \quad x = 5 - 3(y-2)$

$x = 5 - 3y + 6$

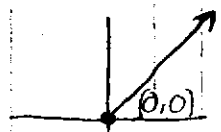
$x = 11 - 3y$

$y = \frac{11 - x}{3}$

$y = -\frac{1}{3}(x - 11)$

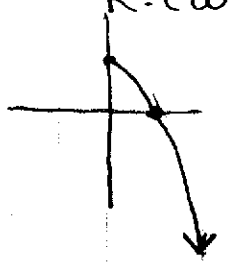


11) $x=\sqrt{t}$ $y=\sqrt{t}$ D: $[0,\infty)$ $x=y$
t: $[0,\infty)$ R: $[0,\infty)$

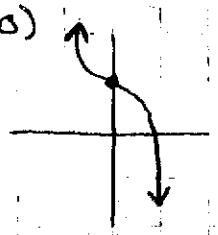


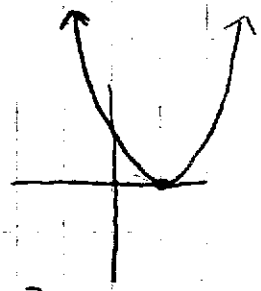
12) $x=\sqrt{t}$ $y=1-t$ D: $[0,\infty)$ $y=1-t$ $-y+1=t$ $x^2=-y+1$
t: $[0,\infty)$ R: $(-\infty,1]$ $y-1=-t$ $x=\sqrt{-y+1}$ $x^2-1=-y$

$-x^2+1=y$



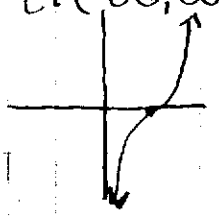
13) $x=\sqrt[3]{t}$ $y=1-t$ D: $(-\infty,\infty)$ $y=1-t$ $-y+1=t$ $x^3=-y+1$
t: $(-\infty,\infty)$ R: $(-\infty,\infty)$ $y-1=-t$ $x=\sqrt[3]{-y+1}$ $-x^3+1=y$





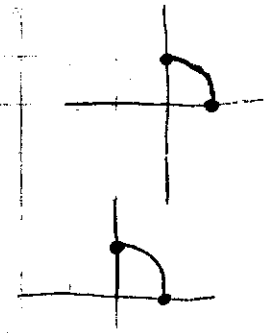
14) $x=t+1$ $y=t^2$ D: $(-\infty,\infty)$ $x=t+1$ $y=(x-1)^2$
t: $(-\infty,\infty)$ R: $[0,\infty)$ $x-1=t$

15) $x=t+1$ $y=t^3$ D: $(-\infty,\infty)$ $x=t+1$ $y=(x-1)^3$
t: $(-\infty,\infty)$ R: $(-\infty,\infty)$ $x-1=t$



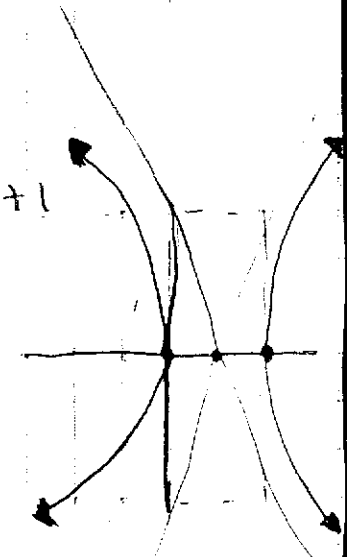
16) $x=\sqrt{1-t}$ $y=\sqrt{t}$ D: $[0,1]$ $y=\sqrt{t}$ $x=\sqrt{1-y^2}$
X: $(-\infty,1]$ Y: $[0,\infty)$ R: $[0,1]$ $y^2=t$ $x^2=1-y^2$
t: $[0,1]$ $x^2+y^2=1$

17) $x=\sqrt{1-t^2}$ $y=t$ D: $[0,1]$ $x=\sqrt{1-y^2}$ $x^2+y^2=1$
t: $[0,1]$ R: $[0,1]$ $x^2=1-y^2$



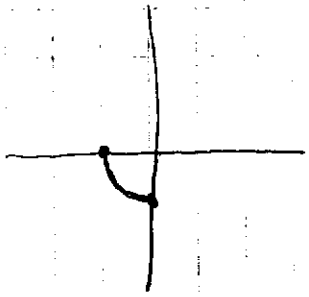
18) $x=1+\sec t$ $y=3\tan t$ D: $(-\infty,0],[2,\infty)$
X: $t\neq \pi/2+k\pi$ Y: $t\neq \pi/2+k\pi$ R: $(-\infty,\infty)$
$t\neq \pi/2+k\pi$

$x=1+\sec t$ $y=3\tan t$ $\sec^2 t=\tan^2 t+1$
$x-1=\sec t$ $y/3=\tan t$ $(x-1)^2=\frac{y^2}{9}+1$
$(x-1)^2=\sec^2 t$ $\frac{y^2}{9}=\tan^2 t$ $\frac{(x-1)^2}{1}-\frac{y^2}{9}=1$



19) $x = -\sqrt{1-t}$ $y = -\sqrt{t}$ D: $[1,0]$ $y = -\sqrt{t}$ $(-y)^2 = t$
$x: (-\infty, 1]$ $y: [0,\infty)$ R: $[1,0]$ $-y = \sqrt{t}$ $y^2 = t$
$t: [0,1]$

$x = -\sqrt{1-y^2}$
$-x = \sqrt{1-y^2}$
$(-x)^2 = 1-y^2$
$x^2 = 1-y^2$
$x^2+y^2 = 1$

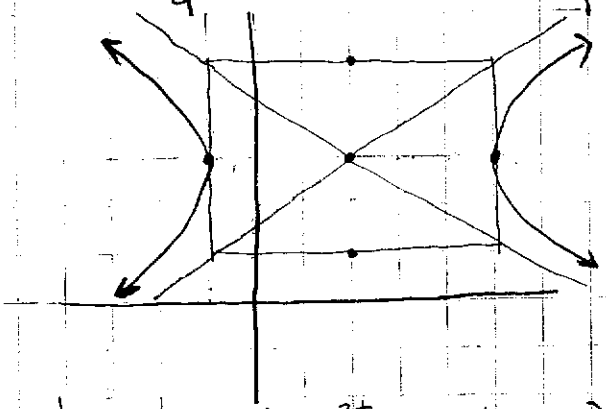


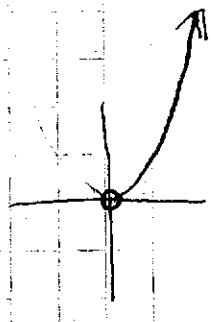
20) $x = 2+3\csc t$ $y = 3+2\cot t$ D: $(-\infty,-1], [5,\infty)$
$t \neq k\pi$ R: $(-\infty,\infty)$

$x = 2+3\csc t$
$x-2 = 3\csc t$
$\frac{x-2}{3} = \csc t$
$\frac{(x-2)^2}{9} = \csc^2 t$

$y = 3+2\cot t$
$y-3 = 2\cot t$
$\frac{y-3}{2} = \cot t$
$\frac{(y-3)^2}{4} = \cot^2 t$

$1+\cot^2 t = \csc^2 t$
$1+\frac{(y-3)^2}{4} = \frac{(x-2)^2}{9}$
$1 = \frac{(x-2)^2}{9} - \frac{(y-3)^2}{4}$





21) $x = e^t$ $y = e^{2t}$ D: $(0,\infty)$ $x = e^t$ $x^2 = y$
$t: (-\infty,\infty)$ R: $(0,\infty)$ $x^2 = e^{2t}$