Solve each system of equations algebraically for x and y and CHECK your answers. Show all of your work.

1. $y-2 x=7$
$x+y=-2$
2. $x+9 y=-6$
$2 x-9 y=15$
3. $x-4 y=16$
$y=1-x$
4. $2 x+y=4$
$x-2 y=7$
5. $4 x=5 y+35$
$6 x+7 y=9$
