1) The equation 2x+y-z=cos(3) is linear in each of x, y and z. cos(3) is just a fancy way of writing a number. Each of the variables is really $x^1$, $y^1$ and $z^1$. Also, you can solve for x, or y, or z. This is a literal equation.

2) The equation 3x+log(3y)=5 is not linear. For example, if you solved for y, you'd get

log(3y)=5-3x  subtract 3x

$10^{\log(3y)} = 10^{5-3x}$  exponentiate both sides

$3y = 10^{5-3x}$  10 and log and inverses, so they cancel

$y = \frac{10^{5-3x}}{3}$  Divide by 3

3) $\sqrt{2}x + y - z = 2$  Each variable is raised to the first, so it's linear. $\sqrt{2}$ is just a number. You can solve for x, or y, or z. None is more important.

4) x+y<2  This is an inequality, and not an equation. But it's linear because it's $x^1$ and $y^1$.