From the list $x+y=m^2$, $x-y=k^2$, $x+z=l^2$, $x-z$, $y+z$ and $y-z$ we have $m>l>k$ because

$$x+y>x+z \implies m>l$$

and

$$x+z>x-y \implies l>k$$

Solving for x, y and z we have

$$x=\frac{k^2+m^2}{2}, y=\frac{-k^2+m^2}{2}, z=\frac{-k^2+2l^2-m^2}{2}$$

so

$$x-z=k^2-l^2+m^2, y+z=-k^2+l^2, y-z=-l^2+m^2$$

This means we iterate for all $l>k$ and $l<m<\sqrt{2l^2-k^2}$.
To speed things up, we cache a matrix of squares.