Answer on Question #76761 – Chemistry – General Chemistry

You gots TWO iodates, $NaIO_3$, and $CsIO_3$,. I suspect that the caesium salt would be more insoluble. Because, the caesium cation is larger than the sodium one, and thus there is probably a better size match between the caesium and iodate ion-pair, and thus decreased solubility.

For the lead halide series:

$$K_{sp}: PbCl_2(1.70 \times 10^{-5});$$

$PbBr_2(6.60 \times 10^{-6})$; $PbI_2(9.80 \times 10^{-9})$ the which gives.

$PbCl_2 \cong PbBr_2 << PbI_2$

order of decreasing solubility.

Size matching between anion, and cation, probably again plays a part here.

As for the alkaline earth carbonates, you are probably going to have to consult your text. A size mismatch again probably lowers the temperature of decomposition, but you need data to argue your position.