**Algebra 2 CP Worksheet 8.6 Part 1 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solve each equation. Check for extraneous solutions. YOU MUST SHOW YOUR WORK.**

1. $log\_{5}\left(2x+15\right)=log\_{5}3x$
2. $log\_{9}\left(5-3x\right)=log\_{9}\left(4x-9\right)$
3. $log\_{4}\left(4x+1\right)=log\_{4}\left(2x+5\right)$
4. $log\_{b}\left(x^{2}-12\right)=log\_{b}x$
5. $log\_{2}4x^{2}=log\_{2}100$