Main Ideas/Questions	Notes/Examples	
WARM-UP Using a common base to solve an exponential equation.	**Directions**: Solve the equations below using a common base.	
	1. $5^{n+10} = 25$	**2.** $9^{a+2} = 27^{4a-2}$
What if a common base is NOT possible?	① **ISOLATE** the exponential expression.	
	② **TAKE THE LOG** of **both sides**.	
	③ You may need to **EXPAND** the log. (Use the Power Rule)	
	④ **SOLVE** and **CHECK FOR EXTRANEOUS SOLUTIONS**.	
	*Rounded answers may not produce the exact same answer, but will be very close.	
Examples	**3.** $2^x = 61$	**4.** $8^{m-7} = 92$
	5. $4 \cdot 7^n = 148$	**6.** $4^{3w} - 5 = 3$

	7. $7-4^{x+1}=18$	**8.** $10\cdot 5^{3k-3}=40$
	9. $4\cdot 3^{n}+15=359$	**10.** $-2\cdot 5^{p}+7=-63$
	11. $5\cdot 9^{v-1}+1=181$	**12.** $8\cdot 11^{7k}-3=213$
	13. $6\cdot 16^{7y+2}-2=82$	**14.** $3\cdot 8^{3-7n}+10=94$