Comparing Fractions Mentally
Video Script

Scene		Full Transcript
1	**Zander:**	Whoa, whoa, fellas! Stop arguing. I just walked in, and Jamie over here told me that these guys have been going at it for about an hour over who on the crew is the faster cleaner. It looks like we need a little lesson in ordering fractions. Time to get another *Problem Solved* before somebody gets mopped.
2	**Zander:**	Guys, you're both fast, but here's the situation. Joe here cleans all of third floor, which has eight larger offices, while Charlie here cleans all of fifth floor, which has 12 smaller offices. Both floors are the same size, but in two hours, Joe can clean 3 of his 8 offices, while Charlie cleans 3 of his 12. That's pretty good, but who's the faster cleaner? This one can be quite the math battle.
3	**Voice-Over Zander:**	For this problem, we know the area of the floor is the same, but the number of individual offices, or the denominator, is different. The guys cleaned the same number of offices, but the amount or size of the offices varied. This follows our rule: the more offices per floor, the larger the denominator; the larger the denominator, the smaller the individual office. When two fractions have the same numerators, we can compare the denominators to determine which is the larger fraction. Okay. Joe cleans 3 of his 8 big offices in two hours, so he cleans $\frac{3}{8}$ of his floor. In the same amount of time, Charlie cleans 3 of his 12 smaller offices or $\frac{3}{12}$ of his floor. As you can see, Joe cleans a little faster than Charlie.
4	**Zander:**	It looks like Chuck's gonna have to pick it up a little.
5	**Voice-Over Zander:**	What these guys don't know is Jamie over here cleans fourth floor, and her floor has 10 offices, and in two hours, she can clean 6 offices. Is Joe still the fastest cleaner in the building?
6	**Voice-Over Zander:**	We actually don't have to find a common denominator to answer our question. Joe cleans 3 of his 8 offices in two hours. Half of his floor is 4 offices, so he cleans less than half of his floor. Jamie cleans 6 of her 10 offices, which is more than half of her floor. You will often compare fractions to $\frac{1}{2}$ to determine which is larger or smaller. Jamie has cleaned more than half, and Joe has cleaned less than half.

7	**Zander:**	It looks like Jamie has bragging rights for now, but let's check back at the end of the day. I think I'll go check on Chuck and Joe.
8	**Zander:**	Almost quitting time. Jamie finished her work almost 15 minutes ago. I wonder how Charlie and Joe are doing.
	Voice-Over Zander:	Joe reported that he cleaned 7 of his 8 offices, and Charlie cleaned 11 of his 12 offices. Each has only one office left to finish. Does that mean they have cleaned the same amount? No! Charlie is $\frac{1}{12}$ from being done, and Joe is $\frac{1}{8}$ from being complete. One twelfth is less than $\frac{1}{8}$, so Charlie must have cleaned more. You'll find that you often compare two fractions to one to determine which is larger or smaller.
9	**Zander:**	Hey, looking good guys. Looks like ordering fractions cleaned up another mess, and that's another *Problem Solved*.