Difficult Multiplication Facts
Video Script

Scene		Full Transcript
1		*Drum-line playing*
	Carlos:	Oh-ho-ho-ho! Hey, what's up? It's Carlos. I've been watching the Drum Slingers practice for a parade, and let me tell you, they are incredible. You know, this reminds me of the time my band went to a national marching band competition, and by my band, I mean I got to go along and help lug around equipment.
2	**Voice-Over Carlos:**	It was really cool to see marching bands from across the country. You wouldn't believe how large some bands are! In fact, I sat near a family who had a couple of kids that kept asking, "How many are in this one?" "How many are in that one?" They kind of drove me crazy!
3	**Carlos:**	Now, not everybody's a wiz at the difficult multiplication facts, but they can be if they learn how to use known facts. Come on. I'll show you, and together we can drum up another *Problem Solved*.
4	**Voice-Over Carlos:**	These guys practice for hours before each performance. First, they learn their music and then focus on learning the various marching formations.
5	**Carlos:**	In a lot of ways, it's similar to mastering multiplication, especially the hard facts. You first have to learn how to think about multiplication, and then you can tackle any problem. I suggest we practice our thinking by using an array model.
	Voice-Over Carlos:	Picture a group of drummers that are in six rows and eight columns. How many drummers would that be?
6	**Carlos:**	Now, a lot of students would think 8 plus 8 is 16, plus another 8 is 24. Twenty-four plus 8 is 32, plus 8 is 40, and 40 plus 8 is 48. You ever done that? Come on; be honest. I used to, but there are more strategic ways.
7	**Voice-Over Carlos:**	There are several ways you could arrange this problem; each is important. First, we could split the array in half and add the parts. One way to do this is to split the array into three rows of eight and three rows of eight. 24 plus 24 is 48. Or, we could split the array in half another way creating four columns of six plus four columns of six. Again, 24 plus 24 is 48. With practice, you can

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		visualize splitting an array in half and then add the parts mentally.
8	**Carlos:**	Another strategy we can use is splitting off five rows or five columns, since multiplying by five is easy.
	Voice-Over Carlos:	We could split the array into five rows of eight and one row of eight. Five times 8 is 40; then, simply add the remaining 8 to get 48. Or, we could also visualize five columns of six and three columns of six; 30 plus 18 is 48.
9	**Voice-Over Carlos:**	For problems with larger numbers, we could use tens to split the array. Suppose we are watching a half-time performance and see a band that has six rows of 23 and want to know how many musicians are in the band. Our problem would be 6 times 23. If we split the array into tens, we can visualize two groups: one that is 6 by 20, 20 is just two tens; and one that is 6 by 3. We can easily recognize that 6 times 20 is 120 and 6 times 3 is 18. 120 plus 18 is 138. Not tough at all. You may want to practice by drawing and splitting the array. But in no time, you will find that it is faster just to think through the problem and do it in your head.
10	**Carlos:**	When dealing with multiplication, don't miss a beat. Start using known facts. This will help to ensure that you drum up success with other math topics, including algebra. *Problem Solved*.

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