

Activity 4: What's the Number?

- PURPOSE** Apply the elimination problem-solving strategy.
- COMMON CORE SMP** SMP 1, SMP 4, SMP 7
- GROUPING** Work individually or in groups of 3 or 4.
- GETTING STARTED** Use the process of elimination to solve the following number puzzles.

1. Circle the number below that is described by the following clues. Keep a record of the order in which you use the clues.
 - a. The sum of the digits is 14.
 - b. The number is a multiple of 5.
 - c. The number is in the thousands.
 - d. The number is not odd.
 - e. The number is less than 2411.

1580	2660	1058	2570	1922	905
	<i>1355</i>		1455		770
2290		2435		1770	
	1832		860		1680

2. What clue or combination of clues did you use first? Why?

1. Solve the following number riddle.
 - I am a positive integer.
 - All my digits are odd.
 - I am equal to the sum of the cubes of my digits.
 - I am less than 300.

Who am I? _____

2. In what order did you use the clues? Why?

Rebecca has a collection of basketball cards. When she puts them in piles of two, she has one card left over. When she puts them in piles of three or four, there is also one card left over, but when she puts them in piles of five there are no cards left over.

If Rebecca has fewer than 100 basketball cards, what are the possible numbers of cards she could have?