Comparing Digits

Materials: Comparing Digits board

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1. Work with a partner. Choose a line of four problems from the board (vertically, horizontally, or diagonally) that you will both solve.

2. Solve the problems independently. Show all work.

3. After you have both completed the problems check your work by sharing your solutions and strategies.

4. Repeat steps 1-3 with another line of four problems.

A. Tom wrote the number 45,358. How many times greater is the 5 in the thousands place, than the 5 in the tens place?

B. Write two different numbers with the digit 6 in the ten thousands place and the hundreds place. How does the value of the 6 in the ten-thousands place compare to the value of the 6 in the hundreds place?

C. Jane wrote the numbers 147,809 and 78,210. In which number does 7 have the greatest value? Explain.

D. Why does 9,324 have a different value than 9,234? Explain how you know that your answer is correct.

E. Write the value of each digit in the following numbers:
a) 343,672
b) 25,035,814
Underline and compare the value of the like digits in each number.

F. 5 appears twice in 355,609. Lisa says the 5 on the left is 100 times greater than the 5 on the right. Is Lisa correct? Explain.

G. Jane wrote the numbers 264,301 and 48,210. In which number does the digit 4 have the least value? Explain your thinking.

H. The digit 3 appears twice in 1,453,308. Lisa says the 3 on the right is 10 times less than the 3 on the right. Is Lisa correct? Explain how you know.

I. Complete the following:
a) 4 hundreds is 10 times as many as 4 ____.
b) 6 ones is 10 times less than 6 ____.
c) 9 thousands is 10 times as many as 9 ____.

J. How does the value of the 2 in 729 compare with the value of the 2 in 792? Explain.

K. Write two different 6-digit numbers in which the 2 on the left is 100 times greater than the 2 on the right.

L. Extend the following pattern:
3, 30, 300, __, __, __, __
Describe what happens to the value of the number as the pattern continues.

M. How many times greater is the value of the 4 to the left than the 4 to the right in 4,654,789? Explain.

N. A four digit number has 6 in both the tens place and the thousands place. The number has 3 hundreds and 9 ones. Write the number and compare the value of the 6 on the left and right.

O. There are two 5s in the number 655,019. Ben says the 5 on the left is 10 times the value of the 5 on the right. Mary says the 5 on the right is $\frac{1}{10}$ the value of the 5 on the left. Who is correct? Explain.

P. How does the value of the 9 in 975 compare with the value of the 9 in 795? Explain.