Playing with Digits

A. Choose the Correct Answer:

1. What is the sum of the digits in the number 4725?

a) 17 b) 18

c) 19 d) 20

2. If the digits of the number 348 are reversed, which of the following is the new number?

a) 843 b) 834

c) 438 d) 384

3. What is the difference between the greatest and smallest 3–digit numbers formed using the digits 5, 2, and 9 without repeating?

a) 693 b) 729

c) 792 d) 972

B. Write the Missing Terms to Complete the Sentences:

1. The sum of the digits in the number 6031 is _____.
2. If the digits of 731 are reversed, the number becomes _____.
3. Interchanging the digits in the tens and ones place of 248 gives _____.
4. The largest 4–digit number formed using digits 7, 3, 0, and 9 is _____.
5. The number formed by placing the digit 6 in the hundreds place of _32 is _____.

C. Mark each sentence with a True (✓) or False (✗):

1. The number 234 has the same value as 432 when its digits are reversed. ☐
2. Changing the order of digits in a number can change its value. ☐
3. The sum of the digits of any number is always even. ☐
4. A number formed by the same digits can have different values. ☐
5. Reversing digits of a 3–digit number always gives a smaller number. ☐

D. Figure out the answers to these questions:

1. Write all the 3–digit numbers you can form using the digits 2, 4, and 7 without repeating any digit.

2. Form the largest and smallest 4–digit number using the digits 1, 3, 5, and 9 only once. What is their difference?
3. A number has digits 4 and 8. If the digit in the tens place is greater than the ones place, what could the number be?
4. If a number is reversed and the result is 198, what could be the original number?
5. A number has digits in the order 6, x, 2. If the number is divisible by 2, what values can x take?
6. Replace the blank: A 3–digit number is formed by repeating a single digit. If the number is 777, what is the digit?
7. Choose a 3–digit number. Reverse the digits. Subtract the smaller number from the larger. Is there a pattern? Try with 2 more numbers and describe it.
8. Find a 3–digit number whose digits add up to 18 and which is divisible by 9.

E. Challenge yourself with these questions:

1. Rearrange the digits of 321 to form the greatest and smallest possible 3–digit numbers.
2. A number has 3 digits. The sum of the first and third digits is 10. List two possible numbers.
3. Find two 3–digit numbers formed by the digits 3, 5, and 8 (without repeating) such that their sum is more than 1200.
4. Take any 3–digit number where the digits are in descending order. Reverse the digits and subtract the smaller from the bigger. Do it again with the result. What do you observe?
5. Form two different numbers using digits 1, 4, 0. What will be the product of both numbers?