February 2018 Puzzle

Between each pair of adjacent digits in the numbers given below, you are to insert one of the operations +, -, ×, and/or ÷ to create an expression that results in 100. You may include any number of parentheses to control the order of operations, but changing the order of the digits and concatenating the digits to form a number with two or more digits is not permitted.
Note: the operator " - " indicates subtraction, not negation.

For example, starting with the number 9861184, we can obtain a result of 100 as follows:

$$9 \times 8 + 6 \div (1 + 1) \times 8 + 4 = 100$$

Obtain a value of 100 by starting with each of the following seven-digit numbers:

1) 3141592   2) 2718281   3) 1234567

February 2018 Solution

There are multiple solutions for each of the given numbers, though below we provide a single solution for each.

$$(3 - 1) \times (4 + 1) + 5 \times 9 \times 2 = 100$$

$$2 + 7 + 1 + (8 + 2) \times (8 + 1) = 100$$

$$1 + (2 + 3) \times 4 \times 5 + 6 - 7 = 100$$