Assignment 6: Implement and Test a Calculator Class  
  
Objective:  
Create a Java class called Calculator that performs basic arithmetic operations (addition, subtraction, multiplication, and division). Then, write JUnit 5 test cases to thoroughly test this class.  
  
Instructions:  
Create a Java class named Calculator with the following methods:  
int add(int a, int b): Returns the sum of a and b.  
int subtract(int a, int b): Returns the result of subtracting b from a.  
int multiply(int a, int b): Returns the product of a and b.  
double divide(int a, int b): Returns the result of dividing a by b as a double. Handle division by zero by returning Double.NaN.  
  
Write JUnit 5 test cases to thoroughly test the Calculator class. Ensure that you cover the following scenarios:  
Test addition with positive numbers.  
Test addition with negative numbers.  
Test subtraction with positive numbers.  
Test subtraction with negative numbers.  
Test multiplication with positive numbers.  
Test multiplication with negative numbers.  
Test division with valid inputs (non-zero divisor).  
Test division by zero.  
  
Implement the Calculator class in a way that it satisfies the requirements, and make sure your class is error-free.