Holistic Numerical Methods Institute
committed to bringing numerical methods to undergraduates

Multiple-Choice Test
Background
Regression

1. The average and standard deviation of the following numbers are

2	4	10	12	1.6	6.4

(A) 6.0, 4.0857

(B) 6.0, 4.2783

(C) 7.2, 4.0857

(D) 7.2, 4.4757

2. The average of 7 numbers is given 12.6. If 6 of the numbers are 5, 7, 9, 12,17 and 10, the remaining number is

(A) -47.9

(B) -47.4

(C) 15.6

(D) 28.2

3. The average and standard deviation of 7 numbers is given a 8.142 and 5.005, respectively. If 5 numbers are 5, 7, 9, 12 and 17, the other two numbers are

(A) -0.1738, 7.175

(B) 3.396, 12.890

(C) 3.500, 3.500

(D) 4.488, 2.512

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4. The sum of the square of the difference between data point and its average for the data is

2	5	10	12	2.5	6.7

(A) 4.023
(B) 13.49
(C) 16.19
(D) 80.93

5. Two medication are tried to heal esophageal ulcers in patients. The time to heal is reported as the time the patient reports 1 or less heartburn episode per week.

Pacalo	Reggon
26	25
23	31
21	32
25	23
32	19
37	26

The medication with less recovery time with standard deviation and mean is

(A) Pacalo, $\bar{x} = 27.33, \sigma = 6.022\,2$
(B) Reggon, $\bar{x} = 26.00, \sigma = 4.900$
(C) Pacalo, $\bar{x} = 27.33, \sigma = 5.497\,2$
(D) Pacalo, $\bar{x} = 27.33, \sigma = 5.497\,2$

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6. A very large number of data points are chosen on a function $y = 3e^{2x}$ from $x = 0.2$ to 2.1. The average value of these values most nearly is

(A) 51.5

(B) 78.2

(C) 97.8

(D) 102

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