

Error Analysis Activity 1

An experiment is done to determine the relationship between variable D and time.

In the experiment, A, B, and time were measured.

time	A	B
± 0.01	± 0.03	± 0.03
0.00	0.99	2.47
1.00	1.12	2.75
2.00	1.20	3.93
3.00	1.30	6.26
4.00	1.40	10.29
5.00	1.50	16.53
6.00	1.60	25.50
7.00	1.70	37.87
8.00	1.79	54.29
9.00	1.91	75.58
10.00	2.00	102.44

D is calculated as follows: $D = \frac{(B - C)}{A^2}$, where C is 2.46 ± 0.01 .

Instructions:

- Create a data table for the given data.
- Produce a graph of D vs time.
- Produce a linear graph of D vs time.
- Give the relationship between D and time.