



Briefing Sheet: **Volcano Team**

Practice Data Answers

Instructions

Before the mission begins, your team should practice analysing volcano data. You should be able to:

- Receive hourly **Rock Fall (RF)** and **Volcanic Tremors (VT)** data and predict what the daily rate will be for each (on two separate worksheets).
- Combine the daily predictions for **RF** and **VT** and determine whether you can predict any danger, and the degree of danger.
- Prepare a report form every five minutes to be read to Mission Control by the Communications Officer
- Draw three graphs. Graph the **Total Seismic Activity, Rock Fall (RF) and Volcanic Tremors (VT)** for each hour.

Rock Falls and Volcanic Tremors Practice Data from Aug 17th

This data is fictitious. However, it represents the type of data that you will be receiving on Mission Day.

Follow the instructions sheet to predict the danger from the Volcano.

Practice with sample data

In the table below is some sample data. The first four have been worked into the examples given on the Seismic Events Work Sheets.

Observation	GMT Hours	Hourly VT	Hourly RF
1	00:00	12	4
2	01:00	6	16
3	02:00	21	21
4	03:00	13	34
5	04:00	11	19
6	05:00	9	23
7	06:00	30	9
8	07:00	42	18
9	08:00	49	26
10	09:00	7	32
11	10:00	13	8
12	11:00	16	12
13	12:00	8	16
14	13:00	29	19
15	14:00	34	24
16	15:00	25	29
17	16:00	52	33
18	17:00	12	11
19	18:00	39	6
20	19:00	51	12
21	20:00	9	19
22	21:00	14	36
23	22:00	19	16
24	23:00	36	20



Seismic Work Sheet: **Rock Fall (RF)**
 Examples and Practice Answers

A	B	C	D	E	F
GMT Hours	Hourly RF (from real-time data)	Cumulative RF	Multiply By	Predicted Daily RF Total (rounded up)	Predicted Total Seismic Activity (RF + VT)
00:00	4	4 (4 + 0)	24.0	96	384
01:00	16	20 (16 + 4)	12.0	240	456
02:00	21	41 (21 + 20)	8.0	328	640
03:00	34	75 (34 + 41)	6.0	450	762
04:00	19	94	4.8	451	754
05:00	23	117	4.0	468	756
06:00	9	126	3.4	428	775
07:00	18	144	3.0	432	864
08:00	26	170	2.7	459	980
09:00	32	202	2.4	485	965
10:00	8	210	2.2	462	931
11:00	12	222	2.0	444	902
12:00	16	238	1.8	428	855
13:00	19	257	1.7	437	889
14:00	24	281	1.6	450	930
15:00	29	310	1.5	465	953
16:00	33	343	1.5	515	1081
17:00	11	354	1.3	460	966
18:00	6	360	1.3	468	1024
19:00	12	372	1.2	446	1021
20:00	19	391	1.1	430	967
21:00	36	427	1.1	470	1022



Seismic Work Sheet: Volcanic Tremors (VT) Examples and Practice Answers

A	B	C	D	E	F
GMT Hours	Hourly VT (from real-time data)	Cumulative VT	Multiply By	Predicted Daily VT Total (rounded up)	Predicted Total Seismic Activity (RF + VT)
00:00	12	12 (12 + 0)	24.0	288	384
01:00	6	18 (6 + 12)	12.0	216	456
02:00	21	39 (21 + 18)	8.0	312	640
03:00	13	52 (13 + 39)	6.0	312	762
04:00	11	63	4.8	302	754
05:00	9	72	4.0	288	756
06:00	30	102	3.4	347	775
07:00	42	144	3.0	432	864
08:00	49	193	2.7	521	980
09:00	7	200	2.4	480	965
10:00	13	213	2.2	469	931
11:00	16	229	2.0	458	902
12:00	8	237	1.8	427	855
13:00	29	266	1.7	452	889
14:00	34	300	1.6	480	930
15:00	25	325	1.5	488	953
16:00	52	377	1.5	566	1081
17:00	12	389	1.3	506	966
18:00	39	428	1.3	556	1024
19:00	51	479	1.2	575	1021
20:00	9	488	1.1	537	967
21:00	14	502	1.1	552	1022