

VIRAL CONTAGION



Lesson 1 Resource Pack

If the infection rate is 2 then you can complete the spread of the infection by filling in the table below.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
New People infected																				
Total people infected																				

Day	21	22	23	24	25	26	27	28	29	30
People infected										
Total people infected										

Now complete the table for an infection rate of 5.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
People infected																				
Total people infected																				

Day	21	22	23	24	25	26	27	28	29	30
People infected										
Total people infected										

You also need to find the infection rate for somewhere in between 2 and 5. It is up to you where you decide to place it, but you will have to consider if you are happy having a decimal infection rate. For example 3.5.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
People infected																				
Total people infected																				

Day	21	22	23	24	25	26	27	28	29	30
People infected										
Total people infected										

Once you have worked out your sequences you can now complete the following two way table. Enter the information into the correct position on the table.

	Number of days		
	5	10	20
Infection rate 2			
Infection rate (your infection rate)			
Infection rate 5			

Now that you have completed your two way table you can represent your findings using graphs. You will need to plot the graphs. There are some templates attached which you can use or you can ask your teacher for graph paper and make up your own axis.

Once you have completed your graphs you will need to think about how you communicate the various possible scenarios to the emergency committee.

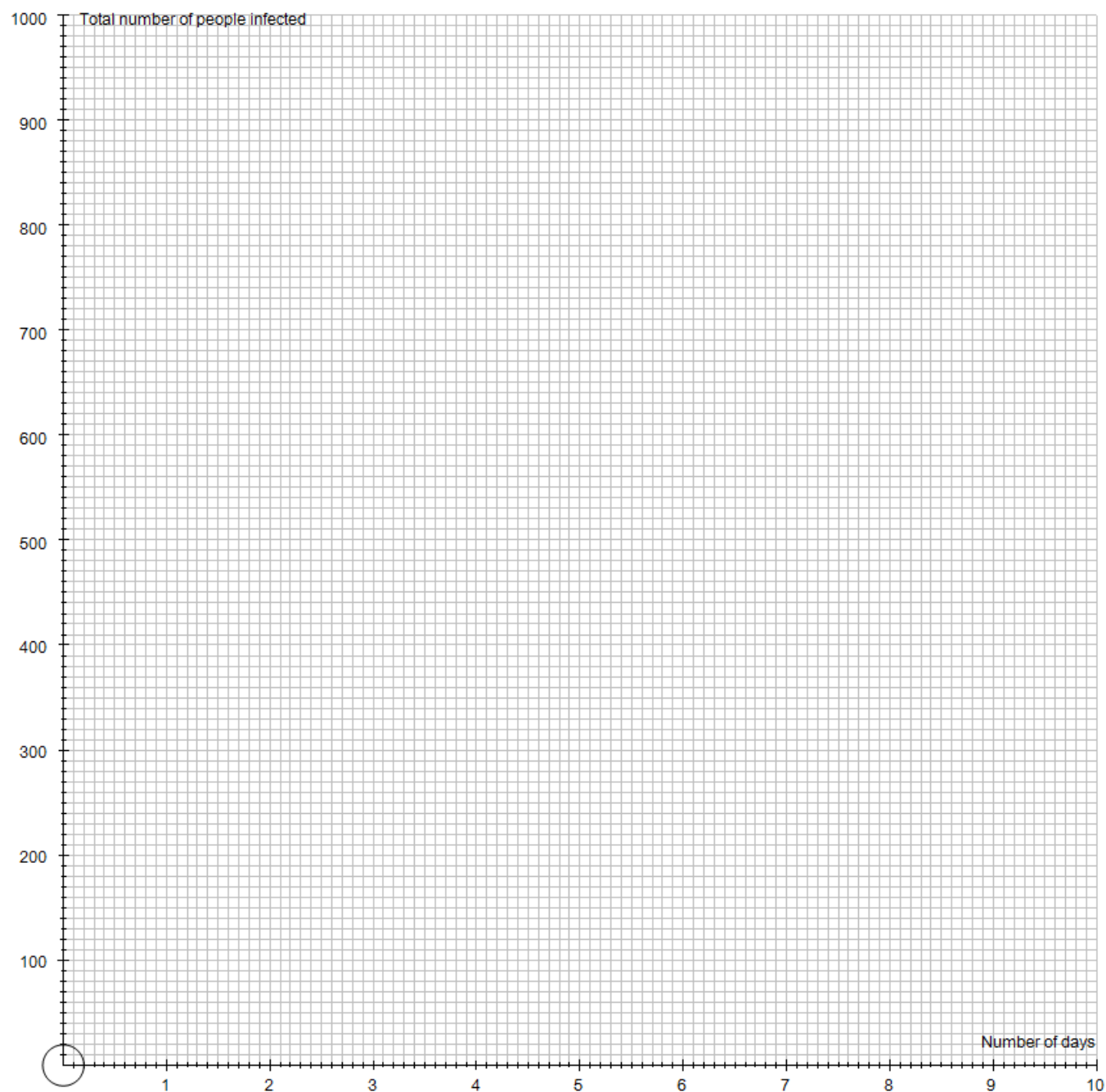
Some of the key questions they will ask will be as follows:

1. Is there anyway of slowing the disease down? Do we need to shut all airports, ports and transport hubs?
2. Will quarantining areas help? Or is it already too late?
3. Does the virus respond to treatment?
4. If the disease spreads at its current rate, how many people will be infected in the next five days?
5. What do you recommend we do?

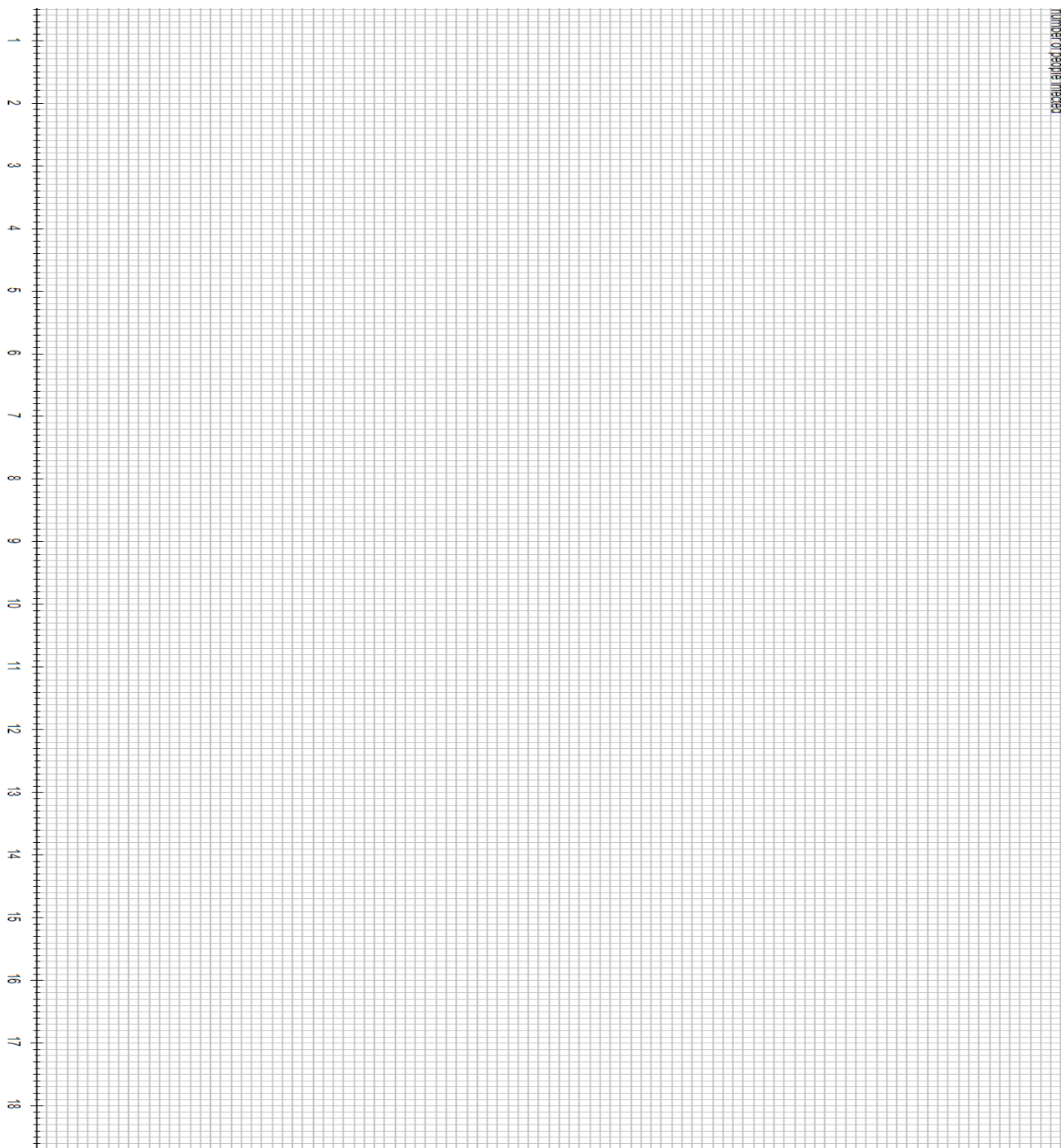
You will need to justify any answers with the maths you have at your disposal so far.

Good luck. You'll need it.

Prepared axis for infection rate 2 after 10 days



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