

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
Advanced Subsidiary GCE

GENERAL STUDIES

2962

The Scientific Domain

INSERT 1

Thursday

13 JANUARY 2005

Morning

1 hour 15 minutes

This insert should be used with Section A.

This insert consists of 2 printed pages.

Information for use in Section A

A student conducted an investigation into the growth of tomato plants in the environment of a greenhouse laboratory. Fifteen tomato plants were grown in three groups of five, using separate plant pots. The pots contained soil of the same composition. Each group of five pots was given a different fertilizer. The height of the tomato plants was recorded every three days over a period of 72 days.

15 plants cultivated in three groups of five (A, B and C).
 Plant group A grown with a potassium based fertilizer.
 Plant group B grown with a phosphate based fertilizer.
 Plant group C grown with a nitrogen based fertilizer.
 Soil of the same composition is used for all plants.
 Minimum temperature maintained at 15 °C.
 Maximum temperature did not exceed 25 °C.
 Equal daily watering.

Plant Group A

Plant Group B

Plant Group C

Time in days	Mean height in cm	Mean height change in cm over three days
0	0	0
3	0	0
6	0	0
9	3	3
12	5	2
15	8	3
18	12	4
21	15	3
24	17	2
27	21	4
30	26	5
33	29	3
36	33	4
39	37	4
42	42	5
45	44	2
48	47	3
51	50	3
54	54	4
57	57	3
60	61	4
63	66	5
66	70	4
69	73	3
72	75	2

Time in days	Mean height in cm	Mean height change in cm over three days
0	0	0
3	0	0
6	2	2
9	3	1
12	5	2
15	7	2
18	9	2
21	12	3
24	14	2
27	17	3
30	20	3
33	23	3
36	27	4
39	30	3
42	33	3
45	37	4
48	41	4
51	45	4
54	48	3
57	52	4
60	55	3
63	59	4
66	62	3
69	67	5
72	71	4

Time in days	Mean height in cm	Mean height change in cm over three days
0	0	0
3	0	0
6	0	0
9	0	0
12	2	2
15	5	3
18	8	3
21	11	3
24	15	4
27	18	3
30	22	4
33	28	6
36	33	5
39	37	4
42	42	5
45	46	4
48	50	4
51	55	5
54	61	6
57	65	4
60	71	6
63	76	5
66	80	4
69	84	4
72	89	5

Fig. 1

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