

## Exercise 1

contour number	Height (metres)	Distance from last contour (mm)	Cumulative distance from start (mm)	Distance from last contour (Km)
start	270	0	0	0.00
contour 2	280	4	4	0.05
contour 3	290	3	7	0.04
contour 4	300	6	13	0.08
contour 5	310	5	18	0.07
contour 6	320	4	22	0.05
contour 7	330	6	28	0.08
contour 8	340	4	32	0.05
contour 9	350	5	37	0.07
contour 10	360	14	51	0.19
contour 11	370	8	59	0.11
contour 12	380	12	71	0.16
contour 13	390	9	80	0.12
contour 14	400	9	89	0.12
contour 15	410	8	97	0.11
contour 16	420	7	104	0.09
contour 17	430	7	111	0.09
contour 18	440	13	124	0.17
contour 19	450	7	131	0.09
contour 20	460	12	143	0.16
Totals				1.91

### Questions

1. What was the total distance of your route? Why is this only an approximation?

*The scale is 75mm = 1Km so with a total distance of 143mm then the journey was 1.91Km long*

2. What was the net height gained during your journey?

*The road is at 270m and the summit at 460m, thus the net height is 190m*

3. How could you use your route profile to better plan your journey time?

*Consider how steep it is and how much extra time will be required, e.g. going slower, for rests etc*

4. What appearance do contours which are close together give your profile?

*The line on the profile will be at a steeper angle*

5. The path at position marked X on the map shows the path following the contour line. What would this mean in real life?

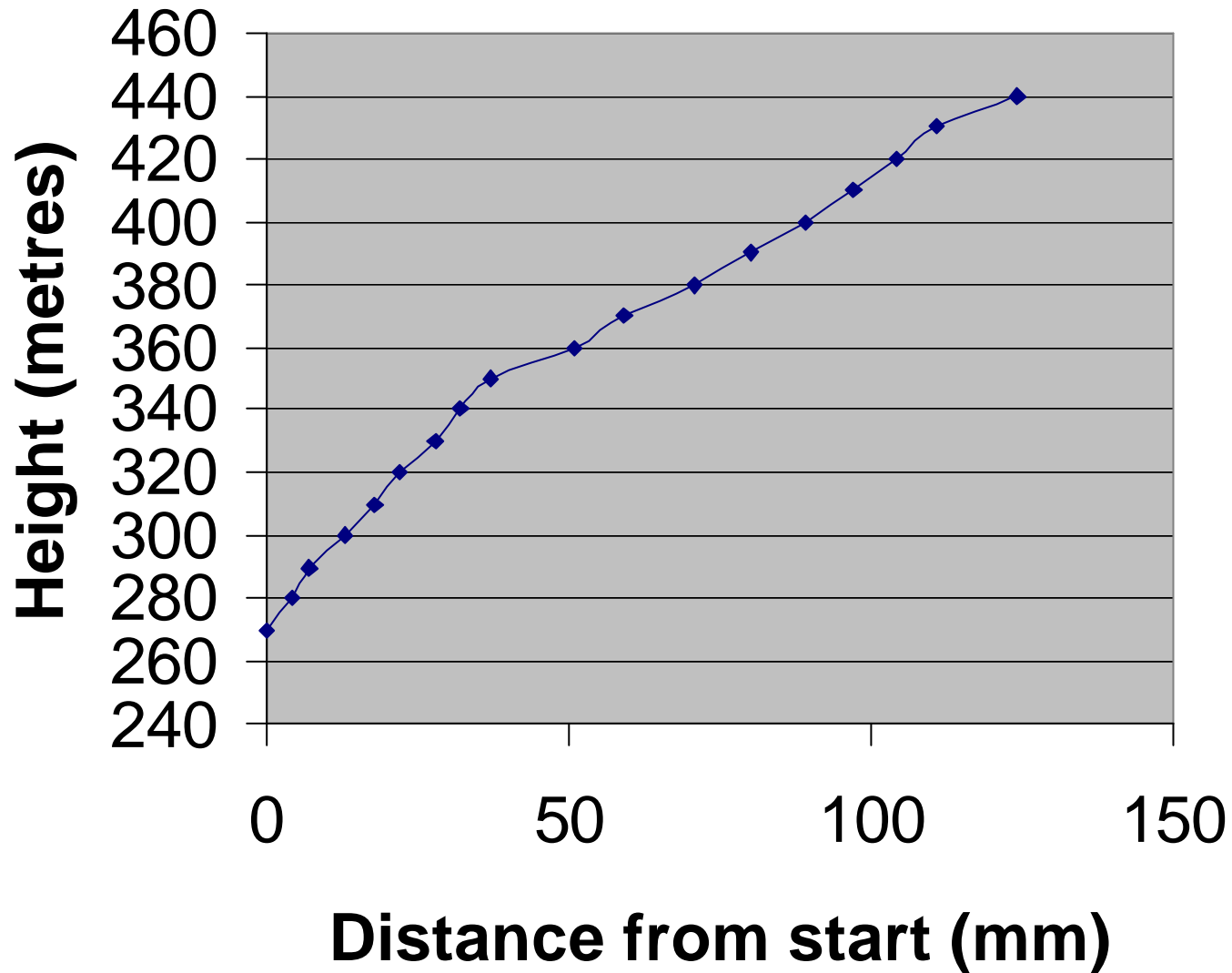
*The path will be on level ground*

6. Which part of your journey was the steepest?

*The first section, between 270m and 350m*



## Graph showing landscape profile of journey



## Exercise 2

### Questions

1. Looking at your 3D model, how does the horizontal size of each step relate to the contours on the map and the steepness of the slope?

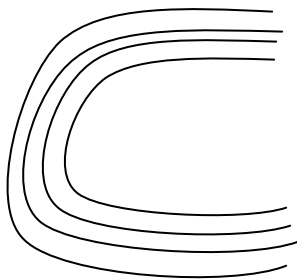
*The smaller the step size, the further apart the contours on the map are and the steeper the slope will be*

2. Using the map identify on your model the route you took to the summit. Was the route you took up the hill a steep one?. Was your route steeper than if you had taken the bridleway all the way and approached the summit of Garn Ddu from the south

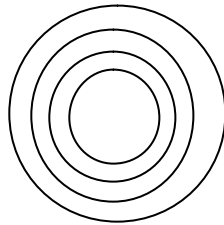
*The route taken was not as steep as if the bridleway had been taken all the way*

3. Draw below what contours you would expect to see on a map for:

- a) a valley
- b) a hill in the middle of a flat area
- c) a steep cliff on the coast

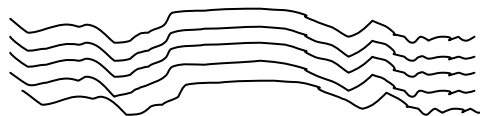


a)



b)

c)



sea