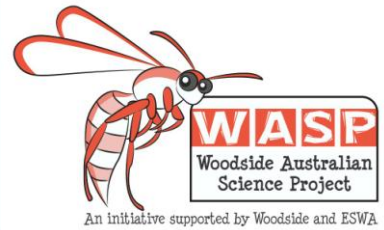


Geological Mapping Exercise 3



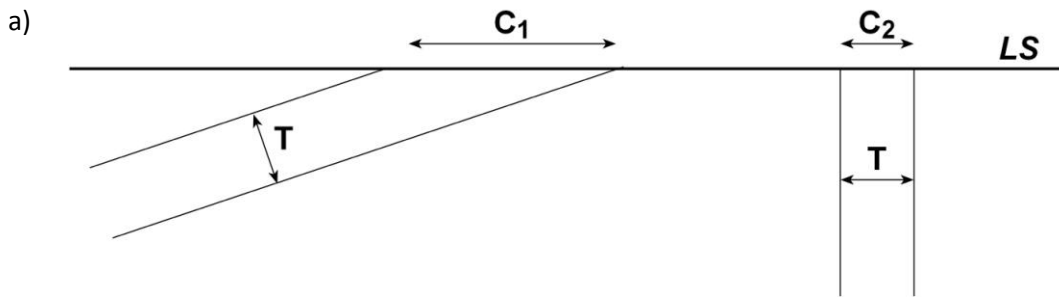
The width of an outcrop is determined by:

- the true thickness of the stratum (formation),
- the angle and direction of dip of the stratum, and
- the slope of the land surface where the outcrop occurs.

1. Refer to the diagrams and answer questions a – d.

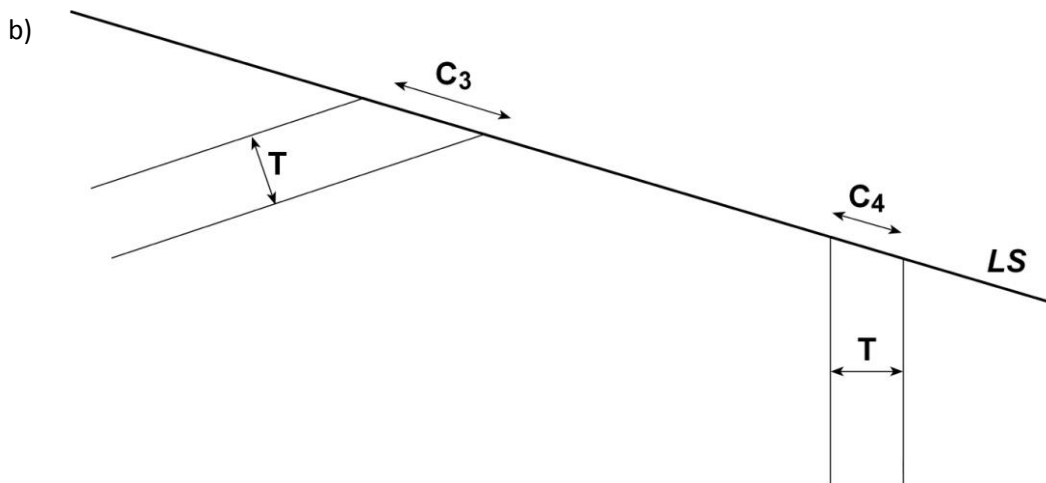
Note: Each diagram uses a scale of 1cm = 2m, T is thickness of stratum, LS is land surface and Cn is width of outcrop.

For each diagram measure the width of the two outcrops (in metres) and give a reason for the difference. Write your answers in the spaces provided below.



T = C1 = C2 =

Reason for difference



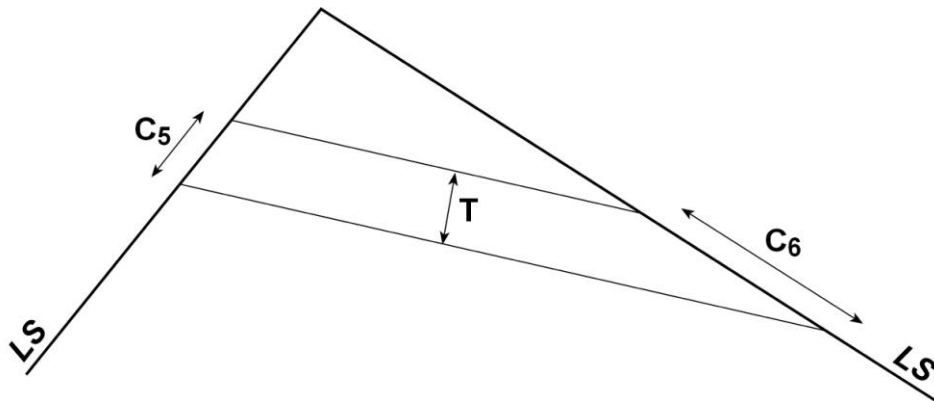
T = C3 = C4 =

Reason for difference

Geological Mapping Exercise 3



c)



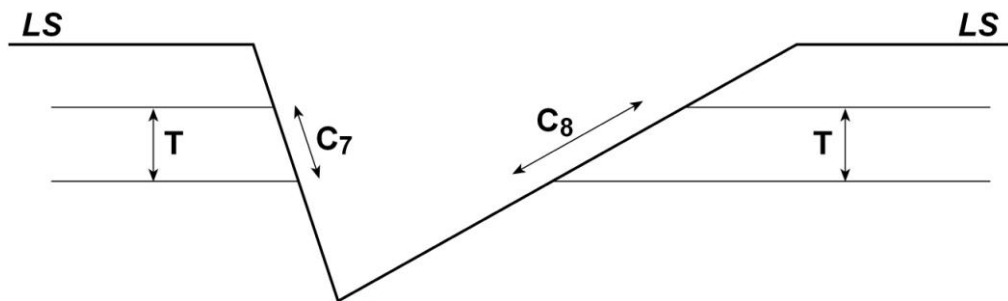
T =

C5 =

C6 =

Reason for difference

d)



T =

C7 =

C8 =

Reason for difference

Geological Mapping Exercise 3

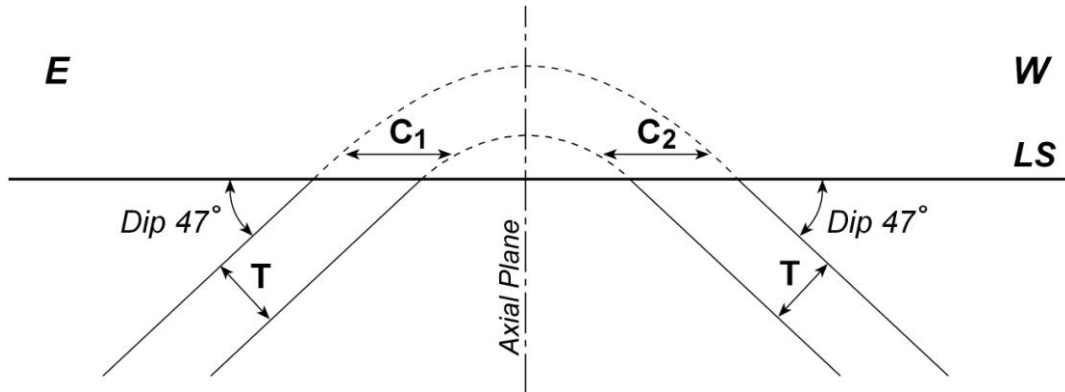


Problem Set 2

Note: Each diagram uses a scale of 1cm = 2m, T is thickness of stratum, LS is land surface and Cn is width of outcrop.

1 For each diagram measure the width of the two outcrops (in metres) and give a reason for the difference or similarity.

a)



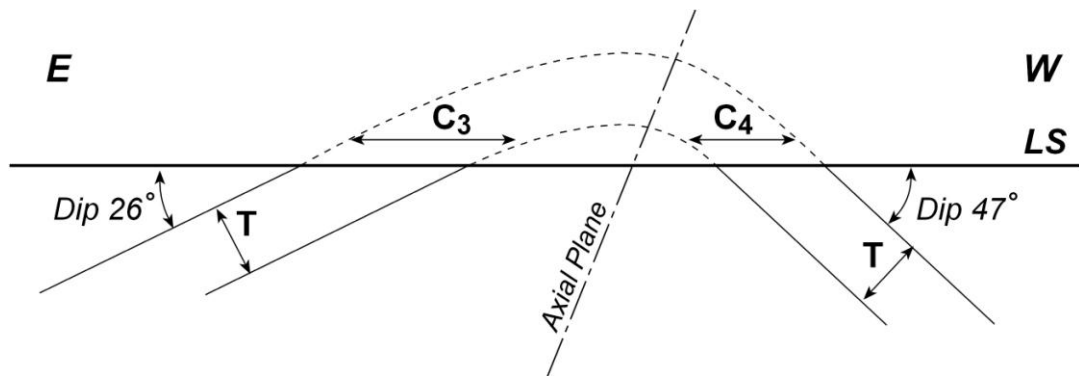
T =

C1 =

C2 =

Reason for difference

b)



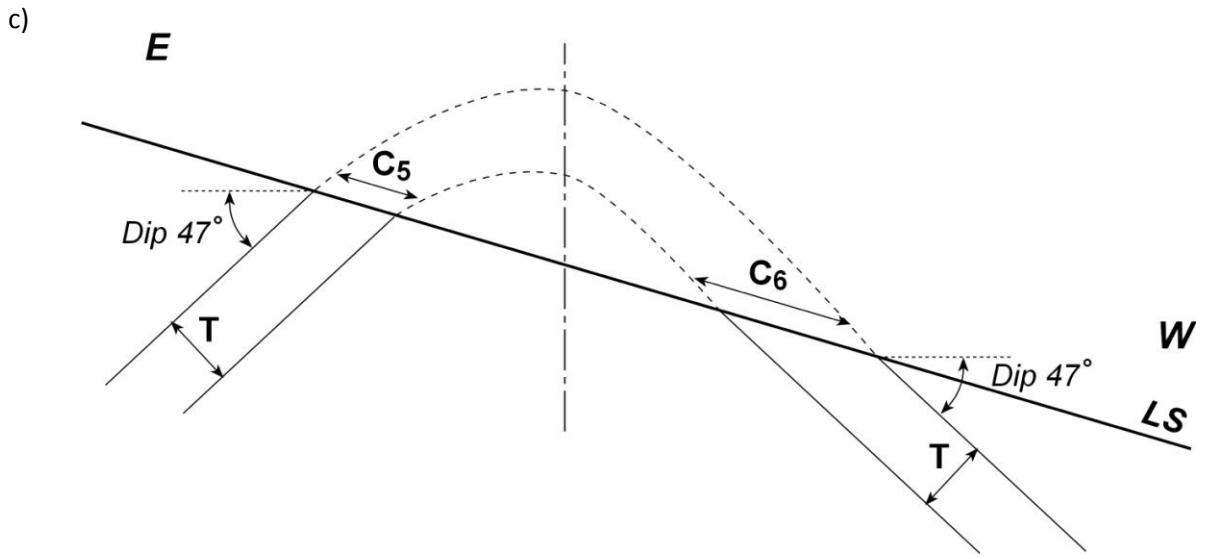
T =

C3 =

C4 =

Reason for difference

Geological Mapping Exercise 3



T =

C5 =

C6 =

Reason for difference

2. For 1b) draw in the space provided below a **plan map** to show what the two outcrops would look like on a land surface.



Geological Mapping Exercise 3



3. A rock stratum with a thickness of 2 metres forms an asymmetrical syncline. The two limbs dip at 20 and 40 degrees respectively.

The stratum outcrops at two places on a level land surface. The distance between the centre of the two outcrops is 16 metres.

- Draw a cross section to show the syncline (Use a scale of 1cm = 2m)
- Measure the width of the two outcrops (in metres)

