<https://www.teagasc.ie/media/website/animals/beef/dairy-beef/Segment-001-of-Section4-Rumen-development.pdf>

Use the above document to answer the following questions:

1. Draw two labelled diagrams to compare the digestive system of a calf and an adult cow.
2. List 3 differences between your diagrams from the question above.
3. Write a paragraph describing the development of the rumen in a calf. Refer to the pre-ruminant digestion, the transition phase and ruminant digestion.
4. At what point should calves be encouraged to eat concentrates and hay.
5. Compare the source of bacterial end products and their function in the rumen of a calf.
6. Name the finger like projections found in the epithelium layer of the rumen and give their function.
7. Compare rumen development when calves are given a diet of (i) milk only, (ii) milk and hay (iii) milk and grain.