Homework 4 - A tree of Ornithischians

Listed are 10 monophyletic groups and 18 shared, derived characteristics. Determine which groups have which shared derived characteristics. On the next sheet of paper, draw a cladogram with BOTH monophyletic groups and at what points on the cladogram the listed characteristics arise.

USE THE TREES FROM CLASS AND YOUR BOOK!

Scan the cladogram with groups and traits clearly labeled and submit to Catcourses.

Example

Ankylosaurids Archosauria Group 3 **Vertebrata** Group 4 Trait c Dinosauria Trait d Group 2 **Nodosaurids** Trait b Marginocephalia Trait a **Ornithischia** Group 1 **Pachycephalosauria** Stegosauria

Ossified tendons at end of tail Overhanging shelf on back of Rows of plates and spines Perferated acetabulum vertebrae Deep-set cheek teeth skull roof Opisthopubic pelvis Ridges/Grooves on **Bilateral symmetry** Antorbital fenestra Crest on humerus Low jaw joint Tall thoracic **Thickened Predentary** Backbone Tail Club **Draw the Cladogram Here**