

Read: Boas Chapter 8 Section 5

- (1) Explore the solutions and solution space of

$$2u'(x) = 3\sqrt[3]{u-2}.$$

- (2) Finish the problem in determining the concentration of the  $\text{CO}_2$  in the lecture hall. We started this in class but here are the details. On average a seated person takes 18 breaths per minute, each breath exhales  $0.016 \text{ m}^3$  of air with 4%  $\text{CO}_2$ . A lecture with 300 students starts with a concentration of 0.4%  $\text{CO}_2$ . The ventilation system delivers  $10 \text{ m}^3$  per minute of outside air to the  $1500 \text{ m}^3$  room. Is the  $\text{CO}_2$  level below the 'drowsy' level of 1000 ppm?