

Intermediate Dynamics: Homework 2

Due: 2 September 2013

- 1 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Conceptual Q 3, page 463.
- 2 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Conceptual Q 9, page 463.
- 3 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Conceptual Q 11, page 463.
- 4 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Conceptual Q 12, page 463.
- 5 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Problem 18, page 464.
- 6 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Exercise 20, page 464.
- 7 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Problem 45, page 465. This is challenging! You will have to assume that the air is an ideal gas, that the temperature stays constant and will have to think carefully about the final gas pressure. You will almost certainly have to solve a quadratic equation, if your solution does not include this then you have probably made an error somewhere.
- 8 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Problem 54, page 466.
- 9 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Problem 59, page 466.
- 10 Knight, *Physics for Scientists and Engineers, 3rd ed*, Ch 16 Problem 69, page 467. Don't forget the atmosphere above the piston!