

## Intermediate Dynamics: Homework 1

Due: 26 August 2013

- 1 *Supplementary*, Conceptual Question 2.
- 2 *Supplementary*, Conceptual Question 3.
- 3 *Supplementary*, Conceptual Question 6. The blocks are all at rest. Does the “into the page” depth of the blocks matter?
- 4 *Supplementary*, Conceptual Question 7. The blocks are all at rest.
- 5 *Supplementary*, Conceptual Question 8. The blocks are all at rest.
- 6 *Supplementary*, Conceptual Question 10.
- 7 *Supplementary*, Exercise 22. Would your answer be any different if this situation were replicated on the moon where  $g$  is different to that on Earth?
- 8 *Supplementary*, Exercise 25.
- 9 *Supplementary*, Exercise 26.
- 10 *Supplementary*, Problem 33.
- 11 *Supplementary*, Problem 51. Part a) is more involved than may initially appear. You should consider the situations where the cylinder floats without being pushed and also when it is pushed. Think about whether the force exerted by the hand depends on the additional distance by which the cylinder is pushed down.
- 12 *Supplementary*, Problem 64.