

PHYS-UA 120 Dynamics Problem Set 1

Due in the “Dynamics” hand-in box before noon on 2014 September 18.

Problem 1:

Kibble & Berkshire, Ch 2, problem 1

Problem 2:

Kibble & Berkshire, Ch 2, problem 16

Problem 3:

Kibble & Berkshire, Ch 2, problem 29

Problem 4:

Prof Hogg did (or will) tap a mug in lecture. What, approximately, is the natural angular frequency ω_0 and quality factor Q for the principal (most excited) mode of the mug? Explain your reasoning. Compare to the Q of a piano string (hit a key and hold down the key to hear the “sustained” note from the piano).