

**WORKSHEET 9/6/23**  
**MATH 2331, FALL 2023**

Consider an economic market with two commodities. We call the price of the first commodity  $P_1$ , the demand for it  $D_1$ , and the supply of it  $S_1$  (similarly for the second product). Let's suppose that these quantities are related as follows:

$$D_1 = 70 - 2P_1 + P_2$$

$$D_2 = 105 + P_1 - P_2$$

$$S_1 = -14 + 3P_1$$

$$S_2 = -7 + 2P_2.$$

- (1) Are these commodities competitive (like different brands of shoes) or complementary (like shoes and socks)?
- (2) Write down a system of linear equations relating the prices of the two commodities at *equilibrium* (when supply meets demand).