**Instructions:** Show all work, with clear logical steps. No work or hard-to-follow work will lose points.

**Problem 1.** (4 points) Find an equation for a polynomial of degree 5 with the following properties:

- 1. zeros at x = 1 and x = -7;
- 2. f(0) = -16;
- 3. f(x) > 0 only on the interval  $(-\infty, -7)$ .