No calculators are allowed!

1. (6 points) Using the axes below, sketch a plausible graph of one function \( f(x) \) which satisfies all of the following properties.

   - \( f(0) = 2 \) and \( f(7) = -1 \)
   - \( f'(x) < 0 \) for \( x < 5 \), and \( f'(x) > 0 \) for \( x > 5 \)
   - \( f''(x) < 0 \) for \( x < 3 \), and \( f''(x) > 0 \) for \( x > 3 \)
2. (4 points) Using the axes below, sketch a plausible graph of a polynomial \( f(x) \) on the interval \([-20, 20]\) given the following information about the first and second derivatives of \( f(x) \).

- \( f'(x) = 4x(x + 15)(x - 9) \)
- \( f''(x) = 12(x + 9)(x - 5) \)