MATH 19501 Quiz 7 - Winter 25

Name: _____   EMPLID: _____

Answer all 2 questions. You must show all of your work as neatly and clearly as possible and indicate the final answer in the provided region for each non-graph question. For all graph questions, you should sketch your graph on the grid provided.

1. (6 points) Let $f(x) = (x - 2)(x + 3)^2(x + 1)^3$.

(a) (4 points) Find the zeros of $f(x)$.

Write your answer in the box below:

(b) (2 points) What is the end behavior of $f(x)$? Enter your answer using the arrow ($\rightarrow$) notation. Write your answer in the box below:

2. (8 points) Let $f(x) = (x+3)^2(x-2)$.

(a) (3 points) Find the intercepts, multiplicity, and end behavior.

Write your answer in the box below:

(b) (5 points) Graph $f(x)$ on the grid below.