1. Whenever possible (the problem allows you to find) find
x and y intercepts, asymptotes (describe which kind and its equation(s)) Use this information to graph.

#10/164
a) \( y = 10(x - 4)(x + 1)(x + 3) \)

#3/164
b) \( y = x^2(4 - x) \)

mine

c) \( y = \frac{x^2 - 4}{4x + 8} \)

#1/169
d) \( xy - x + 3 = 0 \)

#7/169
e) \( y = \frac{x^2 - 9}{x^2 - 4} \)

mine

f(x) = \( \frac{2x}{x^2 - 2x} \)
2. More graphs
   a) \#2/173
      \[ xy - x^2 + 3 = 0 \]
   
   b) \[ y = \frac{x^2 - 3x - 4}{x - 2} \]
   
   c) \[ y^2 = \frac{x}{x + 3} \]
   
   d) \[ y^2 = \frac{x^2 - 9}{x^2 - 25} \]

3. Exponential Functions.
   Give me some examples of transcendental functions. ____________________________

4. Sketch the graph of
   \[ y = -e^x \]
   \[ y = \cosh x \]
5. Other graphs.

\[ y = \sinh x \quad y = \frac{e^x - e^{-x}}{e^x + e^{-x}} \]

6. Find the domain of

\[ y = \sinh x \]

7. What is the range of

\[ y = \cosh x \quad y = \tanh x \quad y = \sinh^2 x \]

8. Write down the definition of \( \cosh x \), \( \sinh x \), and \( \tanh x \)

9. Use the definitions above to
   
   a) show \( \cosh x + \sinh x = ? \) \( \cosh x - \sinh x = ? \)
   
   b) prove \( \cosh^2 x - \sinh^2 x = 1 \)

10. Find \( x \) if

\[ 3 = \log_2 x, \quad x = \quad \log_{10} 1000 = \]

\[ \log_3 x = \quad \log_3 1 = \]

11. Sketch the graph of \( y = \log_2 x \)