Math 190 Domain and Trig Worksheet

Questions:

1. Find the domain of the following functions
   (a) \( x^2 - 7x - 18 \)
   (b) \( \sin x \)
   (c) \( \tan x \)
   (d) \( \sqrt{x^2 - x - 2} \)
   (e) \( \frac{5x^2 - 3x + 2}{5x^2 - x - 18} \)
   (f) \( \frac{5x^2 - x - 18}{5x^2 - 3x + 2} \)

2. Find the zeros of each of the functions from question 1.

3. Plot the graphs of \( \sin x \), \( \cos x \) and \( \tan x \).

4. Compute
   (a) \( \cos \left(\frac{3\pi}{4}\right) \)
   (b) \( \sin \left(-\frac{\pi}{4}\right) \)
   (c) \( \tan \left(\frac{11\pi}{3}\right) \)

5. Find all \( x \) in \([0, 2\pi]\) satisfying the following
   (a) \( \sin x = \cos x \)
   (b) \( \cos^2 x - \sin x - 1 = 0 \)