1. Suggested Problems:
(a) Section 14.1: 1-29 odd, 31-36, 37-60 odd
(b) Section 14.2: 1-37 odd, 41-48, 55-59, 60-66

2. Problems to Submit:

1) Find and sketch the domain of the function
\[ f(x, y) = \ln \left(9 - x^2 - 9y^2\right) \]

2) If \( V(x, y) \) is the electric potential at a point \( (x, y) \) in the \( xy \)-plane, then the level curves of \( V \) are called \textit{equipotential curves} because at all points on such a curve the electric potential is the same. Sketch some equipotential curves if
\[ V(x, y) = \frac{1}{\sqrt{16 - x^2 - y^2}}. \]

Evaluate the limit or show that the limit does not exist.

3) \[
\lim_{(x,y)\to(0,0)} \frac{x^2 + \sin^2 y}{2x^2 + y^2}
\]

4) \[
\lim_{(x,y)\to(0,0)} \frac{xy \cos y}{3x^2 + y^2}
\]

5) \[
\lim_{(x,y)\to(0,0)} \frac{x^2 y e^y}{x^4 + 4y^2}
\]

6) \[
\lim_{(x,y)\to(0,0)} \frac{xy}{\sqrt{x^2 + y^2}}
\]

7) \[
\lim_{(x,y)\to(1,1)} \frac{x^2 y - y^2 x}{\sqrt{x} - \sqrt{y}}
\]

8) Determine the set of point at which function
\[
f(x, y) = \begin{cases} 
\frac{x^y}{x^{x+y} + y^x} & \text{if } (x, y) \neq (0,0) \\
0 & \text{if } (x, y) = (0,0)
\end{cases}
\]
is continuous.