1. If \( f(x) \) has a domain of \([-1, 1]\) and a range of \([-2, 2]\), then what is the domain and range of the following?

\[
3f(2x - 1) - 2
\]

2. Is the following function even, odd, or neither?

\[
f(x) = x^3 - 5x - 1
\]

3. Let \( f \) be the following piecewise function:

\[
f(x) : \\
\begin{cases}
(x - 2) & x < -1 \\
(-x)^2 & -1 \leq x \leq 4 \\
-\sqrt{x} + 1 & x > 4
\end{cases}
\]

(a) Find: \( f(-1) + f(-2) \)
(b) Sketch a graph by using transformations.

University of Florida Honor Code:

On my honor, I have neither given nor received unauthorized aid in doing this assignment.

Signature
1) domain: change \( \frac{-1}{2} \div \frac{1}{2} = \frac{-1}{2} \) 
\[ \left[ -1, 1 \right] \]
\[ \frac{1}{2} \frac{1}{2} \]
\[ \left[ -\frac{1}{2}, \frac{1}{2} \right] \]
\[ +1 \quad +1 \Rightarrow \left[ \frac{1}{2}, \frac{3}{2} \right] \]
range: change \( x \times 3 \)
\[ \left[ -2, 2 \right] \]
\[ x^3 \quad x^3 \]
\[ \left[ -6, 6 \right] \]
\[ -2 \quad -2 \]
\[ \left[ -8, 4 \right] \Rightarrow \]

2) even: \( f(x) = f(-x) \)
\[ x^3 - 5x - 1 \neq -x^3 + 5x - 1 \]
not even
odd: \( f(-x) = -f(x) \)
\[-x^3 + 5x - 1 \neq -x^3 + 5x + 1 \]
not odd
neither
3) a) \[ f(-1) = (-(-1))^3 = 1 \]
\[ f(-2) = (-2-2) = -4 \]
\[ 1 - 4 = -3 \]

b) \[ (4, 15) \]