1. **Reduce** the following rational expression:

\[
\frac{a^3 + b^3}{-a - b}
\]

2. **Simplify** the following complex fraction:

\[
\frac{x}{x + 2} - \frac{x}{x - 2} = \frac{-x}{x^2 - 4}
\]
3. Add &/or subtract the following rational expressions:

\[
\frac{y}{y + 2} - \frac{y - 3}{y} + \frac{4}{y^2 + 2y}
\]

4. Solve the following rational equation:

[Don’t forget to state domain restrictions (for the “D.R.V. test” and state your solution in appropriate form (set notation)!]

\[
\frac{2}{3x+1} = \frac{1}{x} - \frac{6x}{3x+1}
\]
5. Tommie can paint a room in 9 hours working alone. If Bobbie helps Tommie, they can complete the paint job in only 4 hours. How long would it take Bobbie to paint the room if she/he was to work by her/himself?

Extra Credit:

Simplify the following complex fraction: [Don’t forget to state domain restrictions!]

$$1 + \frac{1}{1 - \frac{1}{x + 1}}$$