1. Solve the equation for $x$, if possible.

\[
\frac{2x}{x+1} - \frac{1}{x-1} = 1
\]

\[
(x+1)(x-1) \left( \frac{2x}{x+1} - \frac{1}{x-1} \right) = (x+1)(x-1)
\]

\[
2x(x-1) - (x+1) = x^2 - 1
\]

\[
x^2 - 2x - x - 1 = x^2 - 1
\]

\[
x^2 - 3x = 0
\]

\[
x(x-3) = 0
\]

\[
x = 0 \quad x - 3 = 0
\]

\[
x = 3
\]

2. Solve the equation for $x$.

\[
x(2x-1) = 6
\]

\[
2x^2 - x - 6 = 0
\]

\[
(2x+3)(x-2) = 0
\]

\[
2x + 3 = 0 \quad x - 2 = 0
\]

\[
x = -\frac{3}{2} \quad x = 2
\]

3. Solve the equation for $x$.

\[
x^2 - 5x - 2 = 0
\]

\[
x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}
\]

\[
x = \frac{-(-5) \pm \sqrt{(-5)^2 - 4(1)(-2)}}{2(1)}
\]

\[
x = \frac{5 \pm \sqrt{29}}{2}
\]

---

In order to post grades, please provide a four digit number that you can recall.

*It does not need to be your psu id*