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July 8, 2010
Directions: Show all work for full credit. Clearly indicate all answers. Simplify all mathematical expressions completely. Each part of each question is worth 10 points.

1. Combine the following and simplify:
a. $\frac{5}{4 \mathrm{x}}-\frac{3}{5}$
b. $25+\frac{10}{x+4}$
2. Simplify the following complex fraction:

$$
\frac{\left(\frac{25 x^{2}}{x-5}\right)}{\left(\frac{10 x}{5+4 \mathrm{x}-x^{2}}\right)}
$$

3. Evaluate the following:

$$
\left(\frac{121}{9}\right)^{-1 / 2}
$$

