In problems 1 through 5, solve the given equation:

1. \( \frac{3x - 1}{2} + 5 = 4 \)

2. \( \frac{5}{2x} + \frac{1}{3x} = 1 \)

3. \( 3\sqrt{x} = \sqrt{x} + 8 \)

4. \( x^2 = 8x - 12 \)

5. \( \frac{x}{x - 1} - \frac{1}{x + 3} = 0 \)

In problem 6, use the quadratic formula to solve the given equation. Round your answer to two decimal places.

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

6. \( 5x^2 + 3x - 7 = 0 \)

In problem 7, solve for \( y \) in the given equation:

7. \( x = \frac{5y - 4x}{3 - 2y} \)

In problem 8, simplify the given expression (your answer should be a fraction in lowest terms):

8. \( \frac{2}{x} - \frac{3}{x^2} \)

In problem 9, find all solutions to the following system of equations:

9. \[
\begin{align*}
x + y^2 &= 1 \\
x + 3y &= 3
\end{align*}
\]

In problem 10, rationalize the denominator:

10. \( \frac{y}{\sqrt{x} - \sqrt{y}} \)
Practice Quiz B

In problems 1 through 5, solve the given equation:

1. $5\sqrt{2x+1} - 3 = 7$

2. $x - \frac{x}{4} = 3$

3. $5x^2 - 3 = 3x^2 + 5$

4. $(x + 1)^2 = 3x + 7$

5. $\frac{1}{2x-1} - \frac{3}{x+4} = 0$

In problem 6, use the quadratic formula to solve the given equation. Round your answer to two decimal places.

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

6. $2x^2 = 4x + 5$

In problem 7, solve for $y$ in the given equation:

7. $5 = \sqrt{x^2 + y^2}$

In problem 8, simplify by adding the fractions. (Your answer should be a fraction in lowest terms.)

8. $\frac{1}{x+1} - \frac{3}{(x+1)(x-2)}$

In problem 9, find all solutions to the following system of equations:

9. $3x + y = 9$
   $5x - 2y = 4$

In problem 10, rationalize the numerator:

10. $\frac{\sqrt{x} + 3}{x - 9}$