Algebra 2: Homework 28

Express in simplest radical form:

1. $\sqrt{63} - \sqrt{28}$

2. $\sqrt{160} - \sqrt{40} + \sqrt{90}$

3. $4\sqrt{27} - 6\sqrt{\frac{3}{4}} + 8\sqrt{48}$

4. $\dfrac{\sqrt{50} - \sqrt{8}}{4\sqrt{2}}$

5. $\left(9 - \sqrt{2}\right)\left(7 + \sqrt{2}\right)$

6. When two resistors are connected in a parallel circuit, the total resistance is $\dfrac{1}{\frac{1}{R_1} + \frac{1}{R_2}}$.

   This complex fraction is equivalent to

   (1) $R_1 + R_2$
   (2) $\dfrac{R_1 + R_2}{R_1 R_2}$
   (3) $R_1 R_2$
   (4) $\dfrac{R_1 R_2}{R_1 + R_2}$

7. Simplify: $\dfrac{3y^2 - 12y}{4y^2 - y^3}$

8. The length of a rectangle is $\dfrac{2x + 4}{x^2 - 9}$ and its width is $\dfrac{3}{x - 3}$. Express the perimeter of the rectangle as a single fraction in simplest form.