Radical Arithmetic Worksheet

I Got Arithm

Simplify. The answer should not have radicals in the denominator.

1. $6\sqrt{27} + \sqrt{3}$

6. $\frac{1+\sqrt{2}}{1-\sqrt{2}}$

2. $3\sqrt{90} - 4\sqrt{160}$

7. $\sqrt{x^2 y}\sqrt{y + \frac{1}{y}}$

3. $2\sqrt{11} - \sqrt{121} + 5\sqrt{11}$

8. $(\sqrt{3} + \sqrt{4})(\sqrt{8} - \sqrt{2})$

4. $\frac{\sqrt{5x} + \sqrt{13x}}{\sqrt{x}}$

9. $\frac{\sqrt{9x}}{6 + \sqrt{x}}$

5. $\frac{\sqrt{(5)^2 - (3)^2}}{\sqrt{5}}$

10. $\frac{\sqrt{a} - \sqrt{b}}{\sqrt{a} + \sqrt{b}}$