Adding and Subtracting Rational Expressions with Unlike Denominators II

Simplify each expression.

1) $\frac{x}{x^2-4}+\frac{1}{x-2}$

2) $\frac{3}{y^2-9y}-\frac{2}{y^2-8y-9}$

3) $\frac{2}{w^2+3w+2}+\frac{4}{w^2+6w+8}$

4) $\frac{t}{t^2-25}-\frac{1}{t^2-10t+25}$

5) $\frac{n}{n^2-2n-3}-\frac{1}{n^2-5n+6}$

6) $\frac{v}{2v^2+7v-4}+\frac{2}{2v^2-9v+4}$

7) $\frac{3}{a^2-6a}-\frac{a}{3a^2-17a-6}$

8) $\frac{3}{x^3-4x^2}+\frac{2}{x^3-8x^2+16x}$

9) $\frac{5}{b^2-b+1}-\frac{b}{b^3+1}$

10) $\frac{x}{x^2-y^2}+\frac{y}{x^2-4xy-5y^2}$

Answers to Adding and Subtracting Rational Expressions with Unlike Denominators II

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

2) $\frac{y+3}{y(y-9)(y+1)}$

3) $\frac{6}{(w+1)(w+4)}$

4) $\frac{t^2-6t-5}{(t-5)^2(t+5)}$

5) $\frac{n^2-3n-1}{(n+1)(n-3)(n-2)}$

6) $\frac{v^2-2v+8}{(v+4)(v-4)(2v-1)}$

7) $\frac{3+9a-a^2}{a(a-6)(3a+1)}$

8) $\frac{5x-12}{x^2(x-4)^2}$

9) $\frac{4b+5}{b^3+1}$

10) $\frac{x^2-4xy-y^2}{(x-y)(x+y)(x-5y)}$