Adding and Subtracting Rational Expressions

Add/Subtract the following rational expressions and state restrictions on the variables:

1) $\dfrac{3}{x}+\dfrac{7}{x}-\dfrac{11}{x}$

2) $\dfrac{a+6}{a}-\dfrac{3a-2}{a}$

3) $\dfrac{3}{x}+\dfrac{2}{y}$

4) $\dfrac{6a}{a}-\dfrac{3a+2}{a^2}$

5) $\dfrac{2x-3}{x-4}-\dfrac{x+7}{x-4}+\dfrac{x+3}{x-4}$

6) $\dfrac{x-1}{x+2}-\dfrac{x+7}{x-3}$

7) $\dfrac{4}{a-7}+1$

8) $\dfrac{5}{x-3}-\dfrac{8}{3-x}$

9) $\dfrac{5}{2x-3}+\dfrac{3x}{3x+5}$

10) $\dfrac{x+4}{x^2-121}-\dfrac{3x-2}{x^2+8x-33}$

11) $\dfrac{x-1}{x^2+3x-10}+\dfrac{2x-1}{x^2+8x+15}$

Application #1

Two triangles have the same base length, represented by x . The height of one triangle is x+1 and the height of the other triangles is x +3 . Write and simplify an expression that represents the total area of the two triangles.

Application #2

Rectangle A and Rectangle B each have the same length of 2x+1 . Rectangle A has an area of $6x^2+5x+1$. Rectangle B has an area of $4x^2-4x-3$. Find an expression that represents the ratio of width A to width B.

Homework: Textbook pg 128 #6-8