Quiz

1. Simplify the expression as much as possible: $\dfrac{2x^2 - 11x + 5}{4x^2 - 1}$

2. Simplify the expression as much as possible: $\dfrac{x^2 - 2x - 8}{x^2 + 2x - 8}$

3. Simplify the expression as much as possible: $\dfrac{\dfrac{1}{\sqrt{x}} - \dfrac{1}{2}}{x-4}$

4. Simplify the expression as much as possible: $\dfrac{x+5}{x^2+2x-15} + \dfrac{2}{x-3}$

5. Simplify the expression as much as possible: $\dfrac{x-1}{\sqrt{x}-1}$

6. Simplify the expression as much as possible: $\dfrac{8x}{x^2-6x+5} - \dfrac{x-7}{x^2+x-2}$

7. Rationalize the denominator in: $\dfrac{1}{1+\sqrt{3}}$

8. Take $f(x) = \sqrt{9-x}$. Simplify the quotient $\dfrac{f(x+h)-f(x)}{h}$ until the h cancels from the denominator.

Remember: The answers below are to help you check you work. The important thing is to be able to create and understand the complete solutions to these problems. Please re-read over the definitions/theorems/examples in the above notes as many times as necessary to gain a full understanding. Feel free to email your instructor or visit the MLC if you have questions. Typically on quizzes and exams the answer is worth very few points. The majority of the points are awarded on **the work** needed to get to the answer.

Answers

1. $\dfrac{x-5}{2x+1}$
2. $\dfrac{(x+2)(x-4)}{(x-2)(x+4)}$. Sadly these don't cancel any further
3. $\dfrac{-1}{4\sqrt{x}+2x}$ is far enough.
4. $\dfrac{3}{x-3}$
5. $\sqrt{x}+1$
6. $\dfrac{7(x+5)}{(x+2)(x-5)}$
7. $\dfrac{\sqrt{3}-1}{2}$
8. $\dfrac{-1}{\sqrt{9-(x+h)}+\sqrt{9-x}}$