

Algebra II Homework #14

- 1) Solve: $6x^3 - 11x^2 = 35x$
- 2) Simplify: $(4x - 3y)(6x^2 - 8xy + 5y^2)$
- 3) Solve: $5x^2 - 7x = 2$
- 4) Simplify: $-3(-4x^2 - 7x + 3x^3 - 5) - (6x^2 - 7x - 9)$
- 5) Simplify: $\frac{6x^2 - 17x - 14}{3x^2 + 14x + 8} \div \frac{4x^2 - 49}{2x^2 + 15x + 28}$
- 6) Simplify: $\frac{x}{x+3} - \frac{3-x}{x^2-9}$
- 7) Simplify: $\frac{1 + \frac{1}{x}}{1 - \frac{1}{x^2}}$
- 8) Simplify: $\frac{x-2}{x+1} - \frac{3-12x}{2x^2-x-3}$
- 9) Simplify: $\frac{\frac{1}{a^2} - \frac{1}{a}}{\frac{1}{a^2} + \frac{1}{a}}$
- 10) Simplify: $\frac{3x-4}{4x+1} + \frac{3x+6}{4x^2+9x+2}$
- 11) Simplify: $\frac{2 - \frac{4}{x+2}}{5 - \frac{10}{x+2}}$
- 12) Simplify: $\frac{2x^2-2x}{x^2-2x-15} - \frac{2}{x+3} - \frac{x}{x-5}$
- 13) Simplify: $\frac{1 - \frac{1}{x-4}}{1 - \frac{6}{x+1}}$

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- 14) Simplify: $\frac{x}{3x+4} + \frac{3x+2}{x-5} - \frac{7x^2+24x+28}{3x^2-11x-20}$
- 15) Simplify: $\frac{x-4+\frac{9}{2x+3}}{x+3-\frac{5}{2x+3}}$
- 16) Simplify: $\frac{-x-1}{2x-1} - \frac{x+3}{4x-3} + \frac{10x^2+7x-9}{8x^2-10x+3}$
- 17) Simplify: $\frac{1+\frac{x}{x+1}}{1+\frac{x-1}{x+2}}$
- 18) Simplify: $\frac{2x}{4x^2+2x+1} + \frac{4x+1}{8x^3-1}$
- 19) Simplify: $\frac{2x-3-\frac{10}{4x-5}}{3x+2+\frac{11}{4x-5}}$
- 20) Simplify: $\frac{5}{72x^2ya^3} - \frac{7}{54x^3y^2a}$

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