

Math 06, Homework 5 on Sections 9.1, 9.2, 9.3
due Tue, March 5 at the start of class.

These first eight questions from the book are 2 points each. Write your work on a separate sheet. Show clearly all your working out and reasoning and check your answers match the ones in the book at the end of the section.

1. **Q7, p. 888.** Evaluate $\frac{2-3x}{x^2-4}$ for $x = -1$.
 2. **Q13, p. 888.** For what value of x is $\frac{2x-3}{2x-1}$ undefined?
 3. **Q33, p. 889.** Simplify: $\frac{x^2+2x+1}{6x+6}$
 4. **Q5, p. 901.** Compute and simplify: $\frac{4xy^2}{15x^3} \cdot \frac{25xy}{16y^3}$
 5. **Q17, p. 901.** Compute and simplify: $\frac{c^2+2c-8}{6c} \div \frac{5c+20}{18c}$
 6. **Q1, p. 914.** Compute and simplify: $\frac{9}{4x^3} + \frac{3}{4x^3}$
 7. **Q7, p. 914.** Compute and simplify: $\frac{y^2}{2y+8} + \frac{3y-4}{2y+8}$
 8. **Q9, p. 914.** Compute and simplify: $\frac{5m-2}{m-6} - \frac{3m+10}{m-6}$
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These next seven questions are 2 points each. It is very important that you show clearly any work you had to do to get the answer and explain your reasoning.

- (9.1) Q9.** Evaluate $\frac{-3x^2+4}{-3x-4}$ for $x = -2$.
- (9.1) Q10.** Simplify (by factoring top and bottom first): $\frac{x^2+x-6}{x^2-x-6}$
- (9.2) Q11.** Compute and simplify: $\frac{2x+4}{x+4} \cdot \frac{x^2+8x+16}{x+2}$
- (9.2) Q12.** Compute and simplify: $\frac{x^2}{x+5} \div \frac{3x}{5x+25}$
- (9.3) Q13.** Compute and simplify: $\frac{x}{2} + \frac{x}{3}$

(9.3) Q14. Compute and simplify: $\frac{6x}{x+4} + \frac{24}{x+4}$

(9.3) Q15. Compute and simplify: $\frac{3}{x+3} - \frac{3}{2x+6}$