Name:	Section:

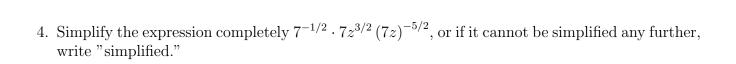
## Algebra Worksheet

This worksheet covers some of the basic algebra skills that you will need for Precalculus. If you struggle with this worksheet, you should seek additional support now and throughout the semester in order to succeed in this course. Hand in this worksheet in class on the due date listed on the course webpage. This worksheet will be graded for correctness. An answer without work will be given no credit.

1. Simplify the expression  $\frac{3x^2+x}{x}$ , or if it cannot be simplified any further, write "simplified."

2. Simplify the expression completely  $\frac{3+6x}{1+x}$ , or if it cannot be simplified any further, write "simplified."

3. Simplify the expression completely  $\frac{1-x^2}{x-1}$ , or if it cannot be simplified any further, write "simplified."



5. Factor the polynomial completely  $x^3 + 3x^2 + 2x$ .

6. Factor the polynomial completely  $6x^2 - 5x - 6$ .

7. Perform the given operation and simplify the expression: (3x - 2)(5x + 1).

8. Perform the given operation and simplify the expression:  $\frac{3x}{x^2 - x - 2} - \frac{2x}{x^2 + x - 6}$ .

9. Solve the equation, then check your answer(s): 5x + 72 = 89 - x.

10. Solve the equation, then check your answer(s):  $\frac{y}{3} + 4 = \frac{y}{2}$ .

11. Solve the equation, then check your answer(s):  $\sqrt{x} = 2 - x$ .

12. Solve the equation, then check your answer(s):  $(x+2)^2 = 4$ .