Student: _____	**Instructor:** Alyson Muff	**Assignment:** Math 012 Quiz 5
Date: _____	**Course:** Math 012 Spring 2013 Section 7982	
Time: _____	**Book:** Martin-Gay: Intermediate Algebra, 6e	

1. Add the proper constant to the binomial so that the resulting trinomial is a perfect square trinomial. Then factor the trinomial.

$x^2 - x + \_\_\_$

Add the proper constant to make a perfect square trinomial.

$x^2 - x +$ ☐ (Type an integer or a simplified fraction.)

Factor the trinomial.

☐ (Use integers or fractions for any numbers in the expression.)

2. Solve the equation by completing the square.

$2y^2 + 1 = 6y$

$y =$ ☐
(Type an exact answer, using radicals as needed. Use a comma to separate answers as needed.)

3. Solve.

$$\frac{2x}{x-3} + \frac{x}{x+2} = -\frac{5}{x+2}$$

$x =$ ☐
(Type an exact answer, using radicals and *i* as needed. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

4. Use the quadratic formula to solve the equation.

$(n-1)^2 = 2n$

$n =$ ☐
(Simplify your answer. Type an exact answer, using radicals and *i* as needed. Use a comma to separate answers as needed.)

5. The hypotenuse of an isosceles right triangle is 2 centimeters longer than either of its legs. Find the exact length of each side. (Hint: An isosceles right triangle is a right triangle whose legs are the same length.)

The length of one of the legs is ☐ cm.
(Simplify your answer, using radicals as needed.)

The length of the other leg is ☐ cm.
(Simplify your answer, using radicals as needed.)

The length of the hypotenuse is ☐ cm.
(Simplify your answer, using radicals as needed.)

6. The base of a triangle is four more than twice its height. If the area of the triangle is 41 square centimeters, find its base and height.

The height of the triangle is ☐ centimeters.
(Simplify your answer. Type an exact answer, using radicals as needed.)

The base of the triangle is ☐ centimeters.
(Simplify your answer. Type an exact answer, using radicals as needed.)

7. Solve.

$$x - \sqrt{56 - 5x} - 4 = 0$$

$x =$ ☐

8. Solve.

$$x^{-2} + 5x^{-1} - 14 = 0$$

$x =$ ☐
(Type an exact answer, using radicals and *i* as needed. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

9. Solve the equation by completing the square. The equation has real number solutions.

$$2x^2 - 3x - 27 = 0$$

$x =$ ☐
(Simplify your answer. Type an exact answer, using radicals as needed. Use a comma to separate answers as needed.)

10. Solve the equation by completing the square.

$$32x^2 + 32x - 17 = 0$$

$x =$ ☐

(Type an exact answer, using radicals as needed. Express complex numbers in terms of i. Use a comma to separate answers as needed.)