**Math 222-Homework- (53402)**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Marks:**

**Question 1**

1. Solve the system of equation by Cramer's rule:(write all details)

Solution:

, ,

1. Combine the given fractions and simplify

(write all details)

Solution:

**Question 2**

1. Simplify the complex fraction

Solution:

=

1. Resolveinto partial fractions (all details are needed)

Solution:

⇒

⇒

**Question 3**

1. Solve by completing the square: In city traffic, a car travels 15 mi /hr faster than a bicycle. The car can travel 15 mile in 3 hours less time than the bicycle. Find the rate of each. (Write all details)

Solution:

Let be the bike rate then is for the car, hence

⇒ ⇒

⇒ ⇒

⇒

⇒

⇒ ⇒

⇒ ⇒

1. Solve the given equation for (all details are needed)

Solution:

⇒ ⇒

⇒ ⇒

⇒ ⇒