MA 152   **EXAM 2**   **FALL 2000**

Name: _____

Student ID: _____

Instructor: _____

Class Hour: _____

Instructions:

(1) Please fill in all the above information and write your name on the top of each of the 4 exam pages.
(2) The point value of each problem appears to the left of the problem.
(3) **You must show sufficient work to justify all answers. Correct answers with inconsistent work will not be given credit. There is no credit given on any problem for guessing correctly. On all word problems, you must set up an algebraic equation(s).**
(4) No partial credit will be given on problems 1-3. Partial credit may be obtained on problems 4-10 provided sufficient work is shown.
(5) Write the answers to all problems in the spaces provided.
(6) No books or papers are allowed. Calculators may be used where appropriate.
(7) The exam is self-explanatory. Please do *not* ask the instructors to interpret any of the exam questions.

Page	Points	Max Possible
1		24
2		30
3		24
4		22
Total		100

Name: _____

Place your answers in the spaces provided. **There is no partial credit on problems 1-3.**
You must show correct work to receive credit.

(8 pts) 1. Solve for x:
$$\frac{5}{3}x - 1 = 4 + \frac{2}{3}x$$

$x =$

(8 pts) 2. Solve for x.
$$3x^2 - 5x = 2$$

$x =$

(8 pts) 3. Recently, Jane purchased a used car. The car was sold to her at a discount of 9% off the advertised price and an additional $1300.23 was deducted <u>after the discount</u> due to a dent on the door. Jane paid $8212 for the car. Find the <u>advertised price of the car</u>. **There is no credit for guessing**. (Name the variable, set up an equation, and solve.)

Name: _____

Advertised price = $

Place your answers in the spaces provided. <u>You must show correct work to receive credit</u>.
(10 pts) 4. Multiply and simplify completely. Leave your answer in factored form.

$$\frac{x^3 + 3x^2}{x^2 - 6x + 5} \cdot \frac{3x^2 - 7x + 4}{3x^2 - 4x}$$

(8 pts) 5. Solve for x. Simplify your answer(s) completely.

$$5x^2 - 8x - 3 = 0$$

$x =$

(12 pts) 6. Simplify completely.

$$\frac{\dfrac{1}{b+2} + \dfrac{3}{b}}{\dfrac{2b+3}{b+2}}$$

Name: _____

Place your answers in the spaces provided. <u>You must show correct work to receive credit.</u>

(12 pts) 7. Solve for x. Check your answer(s).

$$\frac{4x}{x^2 - 16} - \frac{2}{x + 4} = \frac{3}{x - 4}$$

(12 pts) 8. Solve the following system of equations.

$$5x + 3y = 9$$
$$2x - 4y = 14$$

Name: _____

$x =$

$y =$

Place your answers in the spaces provided. <u>You must show correct work to receive credit.</u>

(10 pts) 9. Six hundred people attended the premiere of a motion picture. Adult tickets cost $5 per
           adult and children tickets cost $2 per child. If box office receipts totaled $2361, how many
           children attended the premiere? (Name the variable(s), set up an equation(s), and solve.)

number of children tickets =

(12 pts) 10. Flying with a wind of 65 miles per hour, it took an airplane 4 hours and 30 minutes to get
            from A to B. It took the airplane 6 hours to return the same distance flying against the
            wind. Find the airplane's rate in still air and the distance from A to B.
            (Name the variable(s), set up equation(s), and solve.)

Name: _____

rate of airplane=

distance from A to B =