MA 111　　　　　Exam 1　　　　Spring 2000

Name: _____

Student ID: _____

Instructor: Delworth

Class Hour: _____

INSTRUCTIONS:

(1) **There is no credit for guessing. You must show your work to receive credit!**

(2) Please fill in all the above information and write your name on the top of each of the 4 exam pages.

(3) The point value on each problem appears to the left of the problem.

(4) You must show sufficient work to justify all answers. Correct answers with inconsistent work may not be given credit.

(5) No partial credit will be given on problems 1-3. Partial credit may be obtained on problems 4-10 provided sufficient work is shown.

(6) Circle the letter of the correct answer in problems 1-3, and write the answers to problems 4-10 in the space provided.

(7) No books or paper are allowed. Calculators may be used where appropriate.

(8) The exam is self-explanatory. Please do not ask the instructor to interpret any of the exam questions.

Page	Points	Max Possible
1		21
2		24
3		23
4		32
Total		100

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Circle the correct answer to problems 1-3. <u>You must show work to receive credit</u>.

(7 pts)   1.   Evaluate.

$$\left|-8\right| + \left|5\right| - \left|-6\right|$$

A.   –3

B.   3

C.   19

D.   7

E.   9

(7 pts)   2.   Simplify and give your answer in scientific notation. You may wish to change the numbers to scientific notation before performing multiplication or division.

$$\frac{360,000,000 \times 750,000}{0.00000000018}$$

A. 1.5×10^{-4}

B. 1.5×10^{24}

C. 1.5×10^{22}

D. 1.5×10^{23}

E. 1.5×10^{4}

(7 pts)   3.   Solve $Q = \dfrac{b + t}{c}$, for t

A. $t = Qc - b$

B. $t = Q - c - b$

C. $t = \dfrac{Qc}{b}$

D. $t = \dfrac{Q}{b} - c$

E. $t = \dfrac{Q - b}{c}$

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

(8 pts)   4. Evaluate the expression using the values provided.
                Give your answer as a <u>fraction</u> in simplest terms.

$$\frac{5(x + 2y) - (x - 8)^2}{6xy^2 - 7y^3} \qquad \text{for } x = 3 \text{ and } y = 4$$

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┌─────────────┐
│             │
│             │
│             │
└─────────────┘
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(16 pts) 5. Solve for x.   Give your answer as a <u>fraction</u> in simplest terms.

(8 pts)   a. $16x + 17 = 35 - 6x$

x =
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┌──────────────────┐
│                  │
└──────────────────┘
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(8 pts)   b. $-\frac{7}{2}x + \frac{5}{6} = -5$

x =
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┌──────────────────┐
│                  │
└──────────────────┘
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Place your answers in the spaces provided. <u>You must show your work to receive credit</u>.
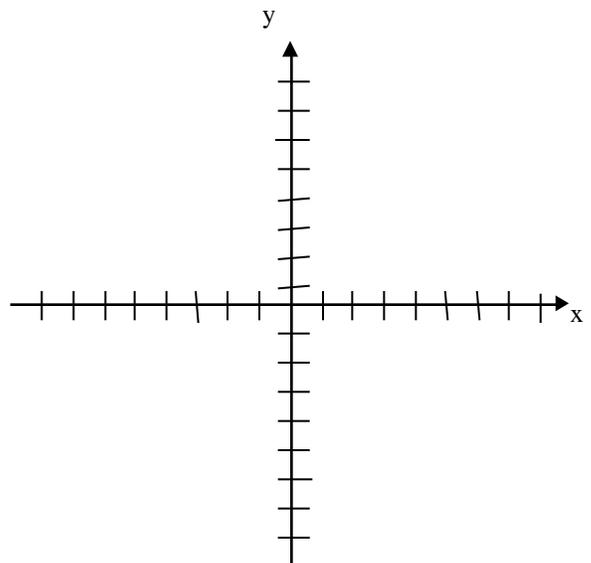
(15 pts) 6. Simplify completely. Do not use negative exponents in your answer.

(5 pts) a. $(-3m^5n^3)(4m^{-7}n^4)$

(5 pts) b. $\dfrac{36x^{-10}y^4}{16x^5y^{16}}$

(5 pts) c. $\left(\dfrac{4t^2z^{-3}}{3t^0z^7}\right)^{-2}$

(8 pts) 7. Graph the equation $y = -3x + 2$. Label three points <u>on the graph</u>.

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

(10 pts) 8. How long will it take an investment of $2500 at 12% simple interest per year to be
worth $3850? A = P + Prt.

time = [   ]

(10 pts) 9. Markie's scores on the first four tests are 90, 88, 81, and 79. What must he score on
the next test so his average score for all 5 tests will be exactly 86?
(Name a variable, set up an equation and solve.)

Score on the 5th test = [   ]

(12 pts) 10. Find the degree measurement of all three angles of a triangle if the triangle's second
angle is 5 more degrees than its first angle and its third angle is 25 degrees less than
3 times the second angle.   Hint: The sum of the angles in any triangle is 180º.
(Name a variable, set up an equation and solve.)

first angle = [   ]

second angle = [   ]

third angle = [   ]