MA 152   Exam 1   Fall 1999

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 on each problem occurs to the left of the problem.

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

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

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

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

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

Page	Points	Max Possible
1		24
2		32
3		20
4		24
Total		100

Name: _____

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

(8 pts.) 1. Express the phrase in algebraic notation using x and y.

Three times a number minus another number squared.

A. $\sqrt{x} - 3y$

B. $2x - 3y$

C. $x^2 - 3y$

D. $3y - x^2$

E. $3y - 2x$

(8 pts.) 2. Calculate, leaving your answer in scientific notation.

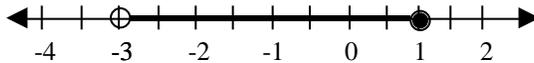$$\frac{(3.1 \times 10^4)(6.0 \times 10^{-8})}{1.5 \times 10^3}$$

A. 1.24×10^{-4}

B. 1.24×10^{-6}

C. $1.24 \times 10^{--8}$

D. 1.24×10^{-3}

E. 1.24×10^{-2}

(8 pts.) 3. Circle the letter that describes the interval:

A.   -3   x   1

B. $-3 > x$ 1

C.   -3 $x < 1$

D. $-3 > x$ 1

E. $-3 < x$ 1

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

(8 pts.) 4. Write $0.\overline{24}$ as a fraction in simplest form.

$$\boxed{}$$

(12 pts.) 5. Bill received scores of 79, 82 and 90 on his first three exams.
What will Bill have to score on his 4th exam to raise his average to exactly 85? Name
the variable, set up an equation and solve. No credit for guessing.

$$\boxed{}$$

(12 pts.) 6. A boat can travel at 27 km/h in still water. The sparkling Wabash River is flowing at a
rate of 6 km/h. How long will it take the boat to travel 55 km down stream (with the
current)?   Give your answer in terms of hours and minutes rounded to the nearest whole
minute. Name the variable, set up an equation and solve. No credit for guessing.

$$\boxed{}$$

Name: _____

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

(8 pts.)   7. Simplify

$$\frac{\dfrac{3}{4} - \dfrac{1}{3}}{\dfrac{5}{6}}$$

(12 pts.)   8.   Perform the indicated operations and simplify.

(6 pts.) a. $(4x - 1)(x + 2)$

(6 pts.) b. $(2x - 7)^2$

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

(12 pts.)   9.   Simplify, writing your answer without negative exponents.

$$\left(\frac{3x^{-3}y}{x^{-6}y^{5}z^{-4}}\right)^{2}$$

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(12 pts.)10. Write $|x + 1|$ 4 without the absolute value symbol. Show the corresponding interval(s) on the real number line.


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