MA 111   **EXAM 1**   **SPRING 2003**

Name: _____

Student ID: _____

Instructor: _____

Section Number: _____ Class Time: _____

Instructions:

(1) Please fill in all the above information.

(2) You must use a #2 pencil on the answer sheet.

(3) On the answer sheet, fill in:

   a) Your last name, first name and middle initial and blacken the appropriate spaces.

   b) Your division and section number and blacken the appropriate spaces.
   (If you do not know your division and section number, ask your instructor.)

   c) Your student identification number and blacken the appropriate spaces.

   d) Leave the test/quiz number blank.

   e) Sign your name.

(4) **Make sure that the cover of this exam matches the color of your answer sheet.**

(5) There are 15 questions. On the answer sheet, blacken your choice of the correct answer in the spaces provided for questions 1-15. Do all of your work on the question sheets. Turn in the answer sheet when you leave and keep the question sheet. **Only the answer sheet will be graded.**

(6) All questions are worth the same. Please answer every question. No points will be deducted for wrong answers.

(7) No calculators are allowed.

(8) The exam is self-explanatory. Do not ask an instructor questions about any of the exam problems.

FORMULAS

$$A = P + Prt \qquad\qquad I = Prt$$

1) Use mathematical symbols to translate this phrase.
   Eight more than three percent of some number.

A. $.03x+8$

B. $8+3x$

C. $8(.03x)$

D. $(8+.03)x$

E. $.3x+8$

2) Divide. $\left(-\dfrac{5}{6}\right) \div \left(\dfrac{2}{3}\right)$

A. $-\dfrac{5}{9}$

B. $-\dfrac{5}{4}$

C. $\dfrac{5}{9}$

D. $-\dfrac{1}{6}$

E. $\dfrac{10}{9}$

3) Calculate and simplify. $\dfrac{5^2+(9-6)^2}{|-12|-2^3}$

A. $\dfrac{17}{2}$

B. $\dfrac{8}{3}$

C. $-\dfrac{19}{20}$

D. $\dfrac{19}{4}$

E. $-\dfrac{8}{3}$

4) Simplify completely. $11a+2[8-3(a-4)]$

    A. $21a-40$

    B. $8a+28$

    C. $21a-4$

    D. $5a-8$

    E. None of these.

5) Solve for x. $\dfrac{3}{4}x-\dfrac{1}{6}=2x$

    A. $x=-\dfrac{2}{21}$

    B. $x=\dfrac{2}{7}$

    C. $x=-\dfrac{2}{15}$

    D. $x=\dfrac{1}{4}$

    E. None of these.

6) One angle of a triangle is five times as great as a second angle. The third angle is 10° less than four times the second angle. Find the measure of the <u>third</u> angle.

    A. 19°

    B. 95°

    C. 76°

    D. 85°

    E. 66°

7) Tom can paddle his canoe at a rate of 8 km/h in still water. The Tippecanoe River flows at a rate of 3.2 km/h. How long will it take Tom to travel 20.3 km <u>upstream</u>? Set up the equation necessary to solve this problem. Do not solve. Assume that x represents the number of hours.

    A. $20.3x = 11.2$

    B. $8x = 17.2$

    C. $11.2x = 20.3$

    D. $3.2x = 28.3$

    E. $4.8x = 20.3$

8) Solve for m. $w = 2m + mtz$

    A. $m = w - 2tz$

    B. $m = \dfrac{w}{2 + tz}$

    C. $m = w - 2 - tz$

    D. $m = \dfrac{w - 2}{tz}$

    E. $m = w - 2 + tz$

9) Caroline is going to invest $3000 at 4% (simple interest). How long will it take for the investment to be worth $3600?

    A. 30 years

    B. 9 years

    C. 5 years

    D. 12 years

    E. 7.5 years

10) Simplify completely. $\dfrac{\left(3x^3y\right)^2}{2xy^5}$

          A. $\dfrac{3x^5}{y^3}$

          B. $\dfrac{9x^8}{2y^3}$

          C. $\dfrac{3x^2}{2y^5}$

          D. $\dfrac{3x^6}{2y^7}$

          E. $\dfrac{9x^5}{2y^3}$

11) Simplify and eliminate negative exponents. $\left(-2a^{-1}b^0\right)\left(5a^4b^{-3}\right)$

          A. $-\dfrac{10}{a^4b^3}$

          B. $-\dfrac{10a^3}{b^3}$

          C. $-10a^3b^0$

          D. $\dfrac{5a^3}{2b^3}$

          E. $-\dfrac{10}{a^4}$

12) Convert 3.06×10^{-4} to decimal notation.

          A. -0.0000306

          B. 0.0000306

          C. 30600

          D. 0.000306

          E. None of these.

13) Simplify. Write your answer using scientific notation.

$$\frac{750,000,000 \times 0.0000012}{0.005}$$

A. 1.8×10^5

B. 4.5×10^{-1}

C. 4.5×10^5

D. 1.8×10^{-1}

E. 4.5×10^4

14) Determine which ordered pair is a solution of $5x + 3y = 8$.
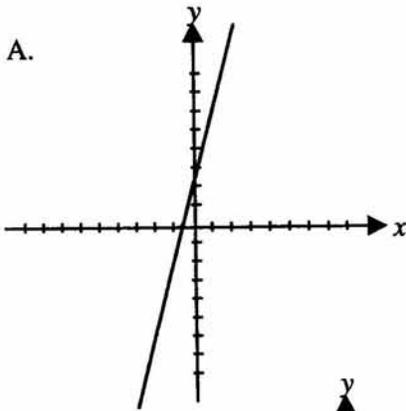
A. $(6, -7)$

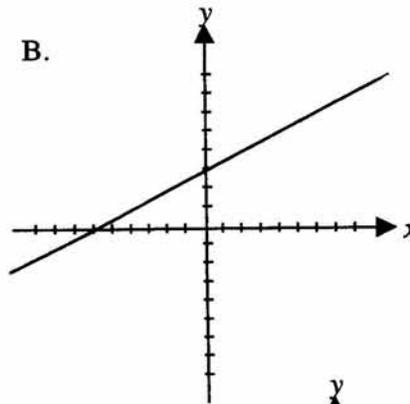B. $(1, -1)$

C. $(-3, 4)$

D. $(4, -4)$
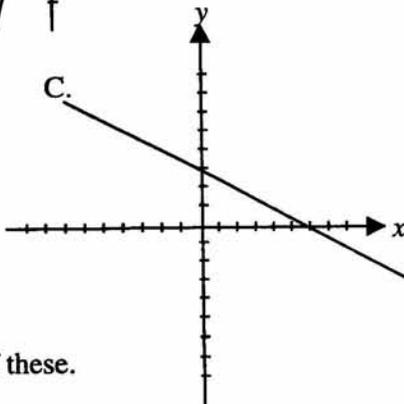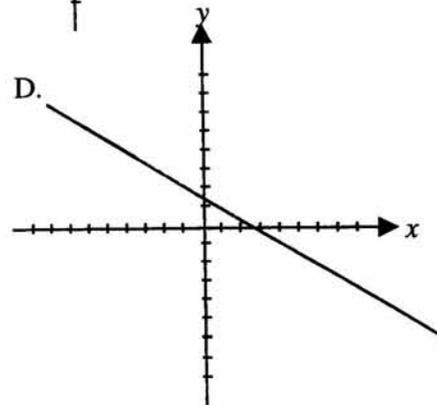
E. None of these.

15) Choose the correct graph for $y = -\frac{1}{2}x + 3$.

A.

B.

C.

D.

E. None of these.