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.

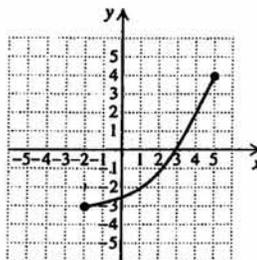| Slope-intercept form	Standard form	Point-slope form
$y = mx + b$	$Ax + By = C$	$y - y_1 = m(x - x_1)$

Use this graph to answer questions 1 and 2.

1) Find the domain of the function.

A. $\{x|-3 \le x \le 4\}$

B. $\{x|-2 \le x \le 5\}$

C. $\{x|-5 \le x \le 5\}$

D. $\{x|-2 \le x \le 4\}$

E. None of these.

2) Find any x-values for which $f(x)=2$.

A. $x=1$

B. $x=0$

C. $x=2$

D. $x=-1$

E. $x=4$

3) Determine the slope and y-intercept of this equation. $3x+y=-6$

A. $m=-3$ $(0,-6)$

B. $m=\dfrac{1}{3}$ $(0,-6)$

C. $m=-3$ $(0,-2)$

D. $m=-\dfrac{1}{3}$ $(0,6)$

E. $m=3$ $(0,-2)$

4) For $f(x)=\dfrac{2x+1}{x-5}$ find $f(x+3)$.

A. $\dfrac{2x+4}{x-2}$

B. $\dfrac{2x+4}{x-5}$

C. $\dfrac{2x+7}{x-2}$

D. $\dfrac{2x+3}{x-5}$

E. None of these.

Use the following information to answer questions 5 and 6. During the first six months of life, a baby's weight is given by $W(t)=1.2t+7.4$ where $W(t)$ is the weight in pounds and t is the number of months. This model is of the form $f(x)=mx+b$.

5) What does b signify?

A. the baby weighs 8.6 lb

B. the baby gains 1.2 lb each month

C. the baby weighed 7.4 lb at birth

D. the baby gains 7.4 lb each month

E. the baby weighed 1.2 lb at birth

6) When will the baby weigh 15.2 lbs?

A. before 4 months

B. between 4 and 5 months

C. between 5 and 6 months

D. between 6 and 7 months

E. after 7 months

7) Find the slope of this equation. $3y-6=0$

A. $\dfrac{1}{2}$

B. -2

C. 0

D. undefined

E. None of these.

8) Find an equation of the line containing

　this pair of points. $(0, 3)$ and $(4, 5)$

A. $y=\dfrac{4}{5}x+3$

B. $y=4x+5$

C. $y=\dfrac{1}{2}x-4$

D. $y=4x+2$

E. None of these.

9) Find the equation of a line perpendicular to the line $y=2x+8$.

A. $y=2x-8$

B. $y=\dfrac{1}{2}x+8$

C. $y=-2x+8$

D. $y=-\dfrac{1}{2}x+8$

E. None of these.

Use $f(x) = -2x$ and $g(x) = 3 + x^2$ to answer questions 10 and 11.

10) Find $f(4) - g(4)$.

    A. 5

    B. −19

    C. 11

    D. −57

    E. −27

11) Find $(f \cdot g)(-1)$.

    A. 8

    B. −8

    C. 4

    D. −6

    E. −4

12) Find the system of equations that has an infinite number of solutions.

    A. $\begin{array}{l} x - 3y = 5 \\ x - 3y = 1 \end{array}$

    B. $\begin{array}{l} x - 3y = 5 \\ x + 3y = 5 \end{array}$

    C. $\begin{array}{l} x - 3y = 5 \\ 2x = 6y + 5 \end{array}$

    D. $\begin{array}{l} x - 3y = 5 \\ 2x = 6y + 10 \end{array}$

    E. $\begin{array}{l} x - 3y = 5 \\ x + 3y = 10 \end{array}$

13) Solve for x. $6x+y=3$
                    $2x-5y=1$

    A. $x=0$

    B. $x=\dfrac{1}{2}$

    C. $x=\dfrac{2}{3}$

    D. $x=\dfrac{3}{8}$

    E. None of these.

14) In a basketball game, the Falcons scored 42 times and had a total of 95 points. How many 2-point shots did they make? Set up the system of equations needed to solve this problem. Let x represent the number of 2-pointers and y the number of 3-pointers. Do not solve.

    A. $x+y=95$
         $2x+3y=42$

    B. $x+y=42$
         $2x+3y=95$

    C. $x+y=95$
         $3x+2y=42$

    D. $x+y=42$
         $3x+2y=95$

    E. None of these.

15) At Bozo's Hot Dog Stand, Fred spent $5.25 for two hot dogs and three drinks. Tom spent $9 for four hot dogs and four drinks. What is the cost of one drink?

    A. $1.25

    B. $1.05

    C. $0.65

    D. $1.50

    E. $0.75