Math 80
Test 3 (Chapters 5 and 6)

Name_____

Fall 2009
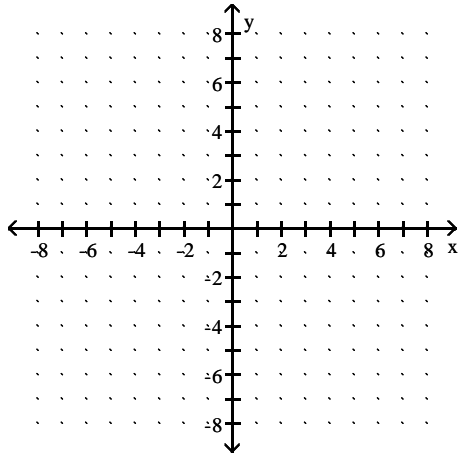Tests from past semesters are provided as a study preparation tool. As tests
are created by different instructors, problems on current tests may differ.
Sample tests are a good beginning point in your test preparation but it is
recommended that you don't use sample tests as your only study resource

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine the solution to the system of linear equations graphically. If the system is dependent or inconsistent, so state.

1) $2x + y = -2$ 1) _____
   $6x + 6y = 6$

A) Infinitely many soltuions   B) $(-3, 4)$
C) $(-3, -4)$ D) No Solution

Find the solution to the system of equations.

2) $-5x - 3y = -5$ 2) _____
   $x - 4y = 1$

A) $(2, 1)$ B) $(-1, -1)$ C) $(1, 0)$ D) no solution

Simplify.

3) $-(-5y)^0$ 3) _____
   A) $-y$ B) -1 C) 0 D) -5

Solve the system of equations (4 & 5)

4) $5x - 9y = 8$

$20x - 36y = 24$

4) _____

A) (8, 24)

B) $\left(\dfrac{32}{25}, -\dfrac{32}{45}\right)$

C) infinite number of solutions

D) no solution

5) $5x + 4y = -3$

$12y = -9 - 15x$

5) _____

A) (5, 4)

B) (0, 0)

C) infinite number of solutions

D) no solution

Express the exercise as a system of linear equations, then find the solution.

6) Julie and Eric row their boat (at a constant speed) 55 miles downstream for 5 hours, helped by the current. Rowing at the same rate, the trip back against the current takes 11 hours. Find the rate of the current.

6) _____

A) 3 mph

B) 2.5 mph

C) 4 mph

D) 8 mph

Simplify.

7) $(-10x^3y)(-6x^6y^5)$

7) _____

    A) $-16x^9y^5$ B) $60x^{18}y^5$ C) $60x^9y^6$ D) $-60x^9y^5$

8) $\left(\dfrac{-5xy^4}{z^2}\right)^3$

8) _____

    A) $-\dfrac{125x^3y^{12}}{z^6}$ B) $\dfrac{125x^3y^{12}}{z^2}$ C) $-\dfrac{15xy^{12}}{z^6}$ D) $-\dfrac{125x^3y^4}{z^2}$

9) $\dfrac{(4xy^{-2})^{-2}}{2xy^3}$

9) _____

    A) $-\dfrac{8y}{x^3}$ B) $-\dfrac{4}{x^3y^{-7}}$ C) $\dfrac{y}{32}$ D) $\dfrac{y}{32x^3}$

Multiply.

10) $2z(8z^2 - 7z + 5)$

10) _____

    A) $16z^3 - 7z + 5$ B) $16z^3 - 14z^2 + 10$
    C) $16z^2 - 14z + 10$ D) $16z^3 - 14z^2 + 10z$

11) $(6x + 7)(4x - 3)$

11) _____

    A) $24x^2 + 10x + 10$ B) $24x^2 + 10x - 21$ C) $10x^2 + 10x + 10$ D) $10x^2 + 10x - 21$

12) $(x - 2)(x^2 + 2x + 10)$ 12) _____

A) $x^3 + 4x^2 - 6x + 20$ B) $x^3 + 14x + 20$
C) $x^3 - 4x^2 + 6x - 20$ D) $x^3 + 6x - 20$

(14 & 15): Divide.

13) $\dfrac{6x^8 + 15x^4 - 15x^2}{3x^2}$ 13) _____

A) $2x^8 + 5x^4 - 5x^2$ B) $2x^6 + 5x^2 - 5$ C) $2x^6 - 5x^2 + 5$ D) $6x^6 + 15x^2 - 15$

14) $\dfrac{x^2 + 17x + 72}{x + 8}$ 14) _____

A) $x + 9$ B) $x - 64$ C) $x^3 - 64$ D) $x^2 + 9$

Multiply using a special product formula.

15) $(x + 5)^2$ 15) _____

A) $25x^2 + 10x + 25$ B) $x^2 + 25$ C) $x^2 + 10x + 25$ D) $x + 25$

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Find the solution to the system of equations.

16) $x - 4y = 11$
$y = -2$

16) _____

Solve the system of equations.

17) $6x + 7y = -29$
$-6x - 14y = 64$

17) _____

(18 &19): Multiply.

18) $\left(-\dfrac{1}{5}y^2\right)\left(\dfrac{1}{9}y^7\right)$

18) _____

19) $(4a + b)(4a - b)$

19) _____

Subtract.

20) $(2x^2 + 19x - 20) - (6x^2 - 13x + 12)$

20) _____

1) B
2) C
3) B
4) D
5) C
6) A
7) C
8) A
9) D
10) D
11) B
12) D
13) B
14) A
15) C
16) (3, –2)
17) (1, –5)
18) $-\dfrac{1}{45}y^9$
19) $16a^2 - b^2$
20) $-4x^2 + 32x - 32$