

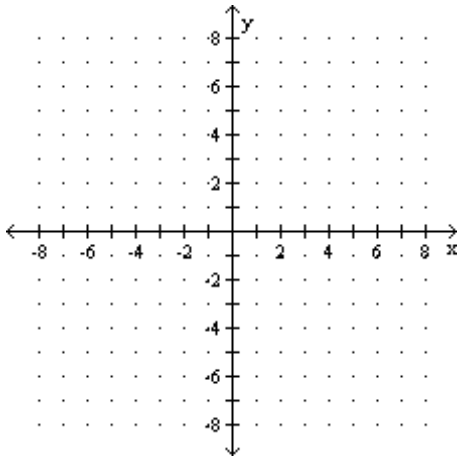
Name \_\_\_\_\_

3 points each

**MULTIPLE CHOICE.** Select 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)  $2x + y = -2$   
 $6x + 6y = 6$



A) (1, -4)

B) (-3, -4)

C) (-3, 4)

D) (3, 4)

Find the solution to the system of equations by substitution.

2)  $7x + y = -20$   
 $6x + 5y = 16$

A) (-3, 7)

B) (-4, 8)

C) (8, -4)

D) no solution

Solve the system of equations using the addition method.

3)  $6x + 7y = -29$   
 $-6x - 14y = 64$

A) (6, 5)

B) (-1, 5)

C) (1, -5)

D) (-6, -5)

Solve the system of equations. Use an appropriate method.

$$\begin{aligned} 4) \quad & 5x - 9y = 8 \\ & 20x - 36y = 24 \end{aligned}$$

A)  $\left(\frac{32}{25}, -\frac{32}{45}\right)$

B) (8, 24)

C) infinite number of solutions

D) no solution

Express the exercise as a system of linear equations, then find the solution. Use a calculator where appropriate.

5) A cruise boat travels 96 miles downstream in 2 hours and returns upstream in 6 hours. Find the rate of the stream.

A) 80 mph

B) 48 mph

C) 32 mph

D) 16 mph

Multiply.

6)  $(-6x^3y)(-3x^5y^6)$   
A)  $18x^{15}y^6$

B)  $-18x^8y^6$

C)  $18x^8y^7$

D)  $-9x^8y^6$

Simplify.

7)  $(4x^5y^8)^2$   
A)  $8x^5y^8$

B)  $4x^{10}y^{16}$

C)  $16x^{10}y^{16}$

D)  $4x^7y^{10}$

8)  $\frac{-8x^8y^7}{-2x^3y}$

A)  $-4x^5y^6$

B)  $4x^5y^6$

C)  $\frac{224}{3}xy$

D)  $4x^{11}y^8$

9)  $-6y^0$

A) 0

B) -6

C) 1

D) -5

Multiply.

10)  $-5x^3(5x^6 + 9x^3 + 1)$

A)  $-25x^9 + 9x^3 + 1$

C)  $-25x^9 - 45x^6 - 5x^3$

B)  $-25x^6 - 45x^3 - 5$

D)  $-25x^9 - 45x^6$

11)  $(x - 10y)(9x + 7y)$

A)  $x^2 - 83xy - 70y^2$

B)  $9x^2 - 83xy - 83y^2$

C)  $9x^2 - 83xy - 70y^2$

D)  $x^2 - 83xy - 83y^2$

Multiply using a special product formula.

12)  $(3x + 2)(3x - 2)$

A)  $3x^2 - 12x - 4$

B)  $9x^2 + 12x - 4$

C)  $9x^2 - 4$

D)  $9x^2 - 12x - 4$

Multiply.

13)  $(9y^2 - 6y + 5)(3y - 5)$

A)  $-18y^3 - 48y^2 + 10y$

C)  $27y^3 - 63y^2 + 45y - 25$

B)  $-18y^3 + 12y^2 - 10y$

D)  $27y^3 + 27y^2 - 15y - 25$

Divide.

$$14) \frac{40x^2 + 15x - 12}{5x}$$

$$A) 8x^2 + 3x - \frac{12}{5}$$

$$B) 40x + 15 - \frac{12}{5x}$$

$$C) 8x + 3 - \frac{12}{5x}$$

$$D) 8x - 9$$

$$15) \frac{x^2 + 12x + 26}{x + 5}$$

$$A) x + 7 - \frac{9}{x + 5}$$

$$B) x + 7 - \frac{9}{x + 5}$$

Free Response. Include all important steps in arriving at your answer. Please circle your final answer.

Find the solution to the system of equations by substitution.

$$16) \begin{aligned} x + 7y &= -2 \\ 3x + y &= 34 \end{aligned}$$

Solve the system of equations using the addition method.

$$17) \begin{aligned} 2x + 12y &= -90 \\ 8x + 2y &= 54 \end{aligned}$$

Simplify.

18)  $(6x-6)(3x-4)$

Subtract.

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

Multiply using a special product formula.

20)  $(10x + 7y)^2$

# Answer Key

## Testname: MATH 80 TEST 3

- 1) C
- 2) B
- 3) C
- 4) D
- 5) D
- 6) C
- 7) C
- 8) B
- 9) B
- 10) C
- 11) C
- 12) C
- 13) C
- 14) C
- 15) A, B
- 16) (12, -2)
- 17) (9, -9)
- 18)  $\frac{18}{x^{10}}$
- 19)  $-4x^2 + 32x - 32$
- 20)  $100x^2 + 140xy + 49y^2$