

Name \_\_\_\_\_  
Date \_\_\_\_\_

MTH 135 - Introduction to Tech Math  
Class #9 - B

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**Final Unit 3 Test A**

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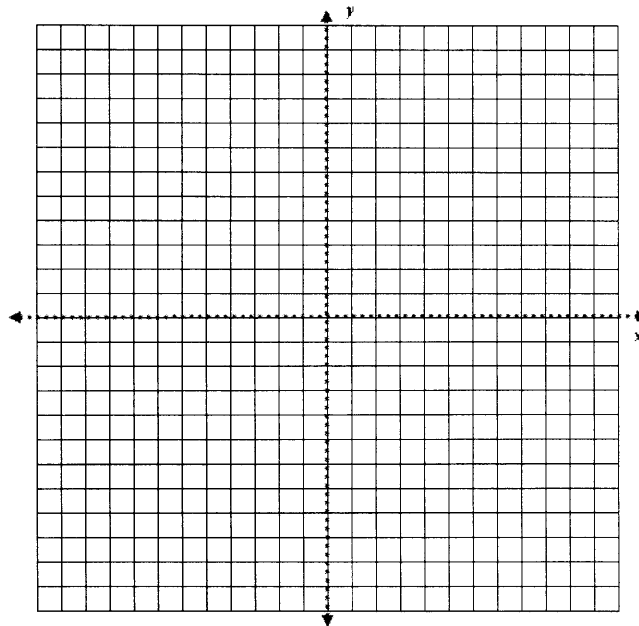
Quality - Accuracy - Transfer - 100%

**Problem 1.**

Using an "acceptable" graphing technique, graph and label the following system of simultaneous linear equations on the graph provided. Provide an appropriate check.

$$x - y = 6$$

$$2x + y = 3$$



**Problem 2.**

Solve the following system of simultaneous linear equations using substitution.

$$y + x = 1$$

$$2y - 8x = 1$$

**Problem 3.**

Solve the following system of simultaneous linear equations by elimination.

$$x + 2y = 11$$

$$3x - 5y = -22$$

**Problem 4.**

The sum of two voltages is 100V. If the higher voltage is doubled, and the lower voltage is halved, The sum becomes 155 V. Using two variables, find the voltages.

**Problem 5.**

5. \_\_\_\_\_

Factor:  $3r - 3x + 3t^2$

**Problem 6.**

6. \_\_\_\_\_

Factor:  $6x - 18xy$

**Problem 7.**

7. \_\_\_\_\_

Factor:  $x^2 - 3x - 40$

**Problem 8.**

8. \_\_\_\_\_

Factor:  $x^2 - 8x + 15$

**Problem 9.**

9. \_\_\_\_\_

Factor:  $x^2 + 11x + 10$

**Problem 10.**

10. \_\_\_\_\_

Factor:  $x^2 + 7x - 30$

**Problem 11.**

11. \_\_\_\_\_

Factor:  $4x^2 - 25$

**Problem 12.**

**12.** \_\_\_\_\_

Factor:  $25x^6 - 64t^8$

**Problem 13.**

**13.** \_\_\_\_\_

Factor:  $3x^2 - 17x - 6$

**Problem 14.**

**14.** \_\_\_\_\_

Factor:  $4x^2 + 33xy + 8y^2$

**Problem 15.**

**15.** \_\_\_\_\_

Factor Completely:  $5x^4 - 80$

**Section 2. Questions from Previous Exams**

**Problem 16.**

**16.** \_\_\_\_\_

Evaluate:  $(x + 4)(x - 3)(x - 2)$

**Problem 17.**

**17.** \_\_\_\_\_

Solve for x:  $15 - \frac{x}{4} = 12$

**Problem 18. Simplify. Write the answer in scientific notation:**

**18.** \_\_\_\_\_

Simplify:  $\frac{5.23 \times 10^5}{11.84 \times 10^{-2}}$

**Problem 19.**

**19.** \_\_\_\_\_

Evaluate:  $(-5x^2y^3)(-6xy^2)$

**Problem 20.**

**20.** \_\_\_\_\_

Evaluate:  $(2 - 5x) - (4 - (3x + 2))$