Student: _____ **Date:** _____	**Instructor:** Deb Wertz **Course:** MAP102 Master (Custom ISBN)	**Assignment:** Homework #28

1. Factor the following trinomial.

$x^2 + 10x + 9$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** $x^2 + 10x + 9 =$ _____ (Type your answer in factored form.)
- **B.** The polynomial is prime.

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2. Factor the trinomial, or state that the trinomial is prime. Check the factorization using FOIL multiplication.

$y^2 - 12y + 35$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- **A.** $y^2 - 12y + 35 =$ _____
- **B.** The polynomial is prime.

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3. Factor the trinomial completely.

$x^2 + x - 12$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- **A.** $x^2 + x - 12 =$ _____
- **B.** The polynomial is prime.

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4. Factor the following trinomial.

$x^2 - 5x - 50$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** $x^2 - 5x - 50 =$ _____ (Type your answer in factored form.)
- **B.** The polynomial is prime.

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5. Factor the following trinomial.

$6y^2 - 18y + 12$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** $6y^2 - 18y + 12 =$ _____ (Factor completely.)
- **B.** The trinomial is prime.

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6. Factor the trinomial.

$2x^2z + 26xz + 80z$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** $2x^2z + 26xz + 80z =$ _____ (Factor completely.)
- **B.** $2x^2z + 26xz + 80z$ is prime.

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7. Factor the polynomial completely.

$x^2 - 6x - 112$

Select the correct choice below and fill in any answer box within your choice.

- **A.** $x^2 - 6x - 112 =$ _____ (Factor completely.)
- **B.** $x^2 - 6x - 112$ is prime.

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8. Factor the polynomial completely.

$x^2 - 3x - 54$

Select the correct choice below and fill in any answer box within your choice.

- **A.** $x^2 - 3x - 54 =$ _____ (Factor completely.)
- **B.** $x^2 - 3x - 54$ is prime.

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9. Factor the polynomial completely.

$3x^2 - 6x + 3$

Select the correct choice below and, if necessary, fill in any answer box within your choice.

- **A.** $3x^2 - 6x + 3 =$ _____
- **B.** $3x^2 - 6x + 3$ is prime.

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10. Factor the trinomial, or state that the trinomial is prime.

$x^2 - 12x - 45$

Select the correct choice below and fill in any answer boxes within your choice.

- **A.** $x^2 - 12x - 45 =$ _____
- **B.** The polynomial is prime.

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11. Factor the trinomial completely.

$x^2 + 24x + 5$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- **A.** $x^2 + 24x + 5 =$ _____ (Factor completely.)
- **B.** The polynomial is prime.

1. A. $x^2 + 10x + 9 =$ **(x + 9)(x + 1)** (Type your answer in factored form.)

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2. A. $y^2 - 12y + 35 =$ **(y − 5)(y − 7)**

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3. A. $x^2 + x - 12 =$ **(x + 4)(x − 3)**

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4. A. $x^2 - 5x - 50 =$ **(x + 5)(x − 10)** (Type your answer in factored form.)

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5. A. $6y^2 - 18y + 12 =$ **6(y − 2)(y − 1)** (Factor completely.)

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6. A. $2x^2z + 26xz + 80z =$ **2z(x + 8)(x + 5)** (Factor completely.)

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7. A. $x^2 - 6x - 112 =$ **(x − 14)(x + 8)** (Factor completely.)

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8. A. $x^2 - 3x - 54 =$ **(x − 9)(x + 6)** (Factor completely.)

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9. A. $3x^2 - 6x + 3 =$ **$3(x - 1)^2$**

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10. A. $x^2 - 12x - 45 =$ **(x − 15)(x + 3)**

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11. B. The polynomial is prime.
