Student: _____ **Date:** _____	**Instructor:** Kathryn Maloney **Course:** MA098 Fall 2020 Maloney Tuesday/Thursday	**Assignment:** Factoring Graded Test (70% required to pass)

1. Factor by grouping.

   $6st + 9t - 10s - 15$

   $6st + 9t - 10s - 15 =$ _____

2. Factor the given polynomial.

   $x^2 + 9x + 14$

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

   - **A.** $x^2 + 9x + 14 =$ _____
   - **B.** The polynomial is prime.

3. Factor the trinomial completely.

   $2x^2 + 27x + 13$

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

   - **A.** $2x^2 + 27x + 13 =$ _____
   - **B.** The trinomial is prime.

4. Factor the trinomial completely.

   $7b^2 + 48b - 7$

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

   - **A.** $7b^2 + 48b - 7 =$ _____
   - **B.** The trinomial is prime.

5. Factor the trinomial completely.

   $6u^2 - 13u + 6$

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

   - **A.** $6u^2 - 13u + 6 =$ _____
   - **B.** The trinomial is prime.

6. Factor the trinomial completely.

$8w^2 - 30w + 18$

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

- **A.** $8w^2 - 30w + 18 =$ _____
- **B.** The polynomial is prime.

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7. Factor completely.

$a^2 + 10a + 11$

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

- **A.** $a^2 + 10a + 11 =$ _____
- **B.** The polynomial is prime.

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8. Factor the trinomial completely.

$9x^2 + 18x - 27$

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

- **A.** $9x^2 + 18x - 27 =$ _____
- **B.** The polynomial is prime.

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9. Factor completely.

$x^2 - x - 6$

- **A.** $(x + 3)(x - 2)$
- **B.** $(x + 1)(x - 6)$
- **C.** Prime
- **D.** $(x + 2)(x - 3)$

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10. The middle term of the trinomial has been rewritten. Now factor by grouping.

$t^2 + 9t + 5t + 45$

- **A.** $(t + 9)(t - 5)$
- **B.** $(t - 9)(t - 5)$
- **C.** $t(t + 59)$
- **D.** $(t + 9)(t + 5)$

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11. Factor as completely as possible. If unfactorable, indicate that the polynomial is prime.

$16x^2 - 56x - 32$

- **A.** $8(2x - 1)(x + 4)$
- **B.** prime
- **C.** $(16x - 8)(x + 4)$
- **D.** $8(2x + 1)(x - 4)$

1. $(2s + 3)(3t - 5)$

2. A. $x^2 + 9x + 14 =$ **$(x + 2)(x + 7)$**

3. A. $2x^2 + 27x + 13 =$ **$(2x + 1)(x + 13)$**

4. A. $7b^2 + 48b - 7 =$ **$(7b - 1)(b + 7)$**

5. A. $6u^2 - 13u + 6 =$ **$(2u - 3)(3u - 2)$**

6. A. $8w^2 - 30w + 18 =$ **$2(4w - 3)(w - 3)$**

7. B. The polynomial is prime.

8. A. $9x^2 + 18x - 27 =$ **$9(x + 3)(x - 1)$**

9. D. $(x + 2)(x - 3)$

10. D. $(t + 9)(t + 5)$

11. D. $8(2x + 1)(x - 4)$