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

1. Factor by grouping.

   $8st + 20t - 10s - 25$

   $8st + 20t - 10s - 25 =$ _____

2. Factor the given polynomial.

   $x^2 + 14x + 33$

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

   - ○ **A.** $x^2 + 14x + 33 =$ _____
   - ○ **B.** The polynomial is prime.

3. Factor the trinomial completely.

   $2x^2 + 23x + 11$

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

   - ○ **A.** $2x^2 + 23x + 11 =$ _____
   - ○ **B.** The trinomial is prime.

4. Factor the trinomial completely.

   $4u^2 + 15u - 4$

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

   - ○ **A.** $4u^2 + 15u - 4 =$ _____
   - ○ **B.** The trinomial is prime.

5. Factor the trinomial completely.

   $10c^2 - 29c + 10$

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

   - ○ **A.** $10c^2 - 29c + 10 =$ _____
   - ○ **B.** The trinomial is prime.

6. Factor the trinomial completely.

$8r^2 - 30r + 18$

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

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

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7. Factor completely.

$a^2 + 4a + 5$

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

- **A.** $a^2 + 4a + 5 =$ _____
- **B.** The polynomial is prime.

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8. Factor the trinomial completely.

$8x^2 + 24x - 80$

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

- **A.** $8x^2 + 24x - 80 =$ _____
- **B.** The polynomial is prime.

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9. Factor completely.

$x^2 - x - 12$

- **A.** $(x + 3)(x - 4)$
- **B.** $(x + 1)(x - 12)$
- **C.** $(x + 4)(x - 3)$
- **D.** Prime

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

$t^2 + 3t + 8t + 24$

- **A.** $(t + 3)(t - 8)$
- **B.** $(t - 3)(t - 8)$
- **C.** $(t + 3)(t + 8)$
- **D.** $t(t + 35)$

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

$14x^2 - 49x - 28$

- **A.** prime
- **B.** $(14x - 7)(x + 4)$
- **C.** $7(2x + 1)(x - 4)$
- **D.** $7(2x - 1)(x + 4)$

1. $(2s + 5)(4t - 5)$

2. A. $x^2 + 14x + 33 =$ **$(x + 11)(x + 3)$**

3. A. $2x^2 + 23x + 11 =$ **$(2x + 1)(x + 11)$**

4. A. $4u^2 + 15u - 4 =$ **$(4u - 1)(u + 4)$**

5. A. $10c^2 - 29c + 10 =$ **$(2c - 5)(5c - 2)$**

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

7. B. The polynomial is prime.

8. A. $8x^2 + 24x - 80 =$ **$8(x + 5)(x - 2)$**

9. A. $(x + 3)(x - 4)$

10. C. $(t + 3)(t + 8)$

11. C. $7(2x + 1)(x - 4)$