

Factoring Special Cases Class Work

🦋 **Objective:** *You will be able to rewrite quadratic expressions.*

★ **Factor each quadratic expression. Discuss any patterns you notice with your group.**

1. $4x^2 + 12x + 9$

2. $121b^2 - 198b + 81$

3. $9d^2 - 6d + 1$

4. $144z^2 + 168z + 49$

5. $16k^2 - 40k + 25$

6. $100p^2 - 200p + 100$

➔ **Generalize:** *What special aspects of the standard form and factored form of these expressions do you notice? What relationships between the two forms can you observe?*

★ Factor each quadratic expression. Discuss any patterns you notice with your group.

7. $16x^2 - 1$

8. $36w^2 - 9$

9. $169q^2 - 16$

10. $4z^2 - 4$

11. $81u^2 - 49$

12. $196x^2 - 225$

→ **Generalize:** *What special aspects of the standard form and factored form of these expressions do you notice? What relationships between the two forms can you observe?*

✎ **Mixed Practice:** Factor each expression.

1. $25r^2 - 289$

2. $64s^2 - 48s + 9$

3. $49t^2 + 224t + 256$

4. $1 - 16y^2$

5. $27b^2 - 75$

6. $b^4 - 36$

7. $32x^2 - 112x + 98$

8. $125p^2 - 405$

9. $24d^4 + 72d^2 + 54$

10. $63f^4 - 42f^2 + 7$

✎ **Reflect:** What special relationships were you able to discover and apply today? What questions do you still have regarding quadratics? How do you feel about the work you completed today?