1. Complete this exercise. As you make decisions, jot down some explanations as to why you're making each of your choices.

2. Factor each of the expressions following your decision-making process.

Match each expression to the type of factoring you would use to factor it. It is possible that some types may be used more than once.

_____ 1) $a^2 - 81$ A) Difference of Squares

_____ 2) $x^2 + 4x + 3$ B) Perfect Square

_____ 3) $x^2 - 8x + 16$ C) Decomposition (ax^2 + bx + c, where a ≠ 1)

_____ 4) $2x^2 + 7x + 6$ D) Common Factoring

_____ 5) $x^2 - 7x$ E) Factoring a simple trinomial (x^2 + bx + c)

_____ 6) $4x^2 - 5x + 1$

_____ 7) $25y^2 - 70y + 49$

_____ 8) $100x^2 - 36y^2$

_____ 9) $4k - 8k^3$

_____ 10) $x^2 + 3x - 18$

3. Reflection (optional, study strategy):

Answer the following questions. For i), you can choose to create visual (e.g., flowchart with examples) or describe in words and examples.

i) When would I use each of the different forms of factoring? How do I know this?

ii) When would I be required to use two forms of factoring in one problem?