MATH 120A Prep: Proof Techniques

Examples:

1. Which proof technique would you use to show $\sqrt{2}$ is irrational?

2. Which proof techniques would you use to show that n^2 is odd if and only if n is odd?

3. Which proof technique would you use to show that for any positive integer n that $n^3 - n$ is divisible by 3?

| 4. Which proof technique would you use to show that | for sets A, B, C we have $(A \setminus B) \cup (C \setminus B) \subseteq (A \cup C) \setminus B$? |
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| 5. Which proof technique would you use to show that | t if r and s are rational numbers then $r+s$ is rational? |
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