THE RECURSION THEOREM (OUTLINE)

REBECCA WEBER

(1) Introduction: idea of Recursion Theorem, outline of paper, maybe history

(2) Computability background as needed (φ_e etc)

(3) S-m-n Theorem - proof if needed for understanding

(4) Recursion Theorem with proof, simple corollaries/uses

(5) Relativization of Recursion Theorem (additional background as needed) – other generalizations if possible

(6) Significant application of Recursion Theorem: degree that is not high_n or low_n for any n. Certainly including the part of the proof that depends on the Recursion Theorem, but probably some other needed results stated without proof.

(7) Bibliography - starting with Soare's *Recursively Enumerable Sets and Degrees* textbook.