14.123 Microeconomics III—Problem Set 4

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Instructions. You are encouraged to work in groups, but everybody must write their own solution to the problem that is for grade. Good Luck!

1. (For Grade) Ann is a Rank-dependent utility maximizer with utility function \( u(x) = x \) (i.e. "risk neutral") and probability weighting function

\[
w(p) = p^{1+\alpha},
\]

where the parameter \( \alpha \in (-1, \infty) \) measures the level of her "optimism". There are assets, indexed by \( a \in [-1, 1] \), that pay a single dividend

\[D_a = 1 + as\]

where

\[s \in [-1, 1]\]

is an unknown state that is uniformly distributed over \([-1, 1]\). Find the preference relation of Ann over the assets \( a \) as a function of \( \alpha \). Briefly interpret your result.

2. Lecture Notes, Exercise 6.5.

