

Hwk 2: Mortgages

Due in class on Friday 1/9

1) Consider a mortgage on a \$200k house with a 20% down-payment. a) At 5% APR what is the monthly payment on a 30 year mortgage (assume payments are made at the end of the month)? b) How much principal is outstanding after 3 years (after the 36th payment)? c) Suppose that the interest rate then (after 3 years) jumps to 7%. What is the monthly payment now (for the remaining 27 years of the mortgage)?

2) For a \$100k mortgage, make a plot of the monthly payment m (y-axis) versus the APR (x-axis) for both 15-year and 30-year mortgages (on the same graph).

3) Look-up the current rates and calculate how big a mortgage (ignoring any down-payment) you could afford on a \$1000/mo. payment (for both a 15-year and a 30-year mortgage).