If James can afford mortgage payments of $\$ 300 /$ month for 30 years, what is the most expensive house price that he can afford now?

Assume an annual interest rate of $6 \%$.

## EX 8.5.2:

A borrower has taken out a 30-year mortgage for $\$ 120,000$ at a $6 \%$ annual interest rate.
(a) Find the monthly payment using the table on the right $\rightarrow$

| Monthly Payment per \$1000 | Number of Years for the Loan |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Annual Interest Rate | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ |
| $4 \%$ | $\$ 29.53$ | $\$ 22.58$ | $\$ 10.12$ | $\$ 6.06$ | $\$ 4.77$ |
| $5 \%$ | $\$ 29.97$ | $\$ 23.03$ | $\$ 10.61$ | $\$ 6.60$ | $\$ 5.37$ |
| $6 \%$ | $\$ 30.42$ | $\$ 23.49$ | $\$ 11.10$ | $\$ 7.16$ | $\$ 6.00$ |
| $8 \%$ | $\$ 31.34$ | $\$ 24.41$ | $\$ 12.13$ | $\$ 8.36$ | $\$ 7.34$ |
| $10 \%$ | $\$ 32.27$ | $\$ 25.36$ | $\$ 13.22$ | $\$ 9.65$ | $\$ 8.78$ |
| $12 \%$ | $\$ 33.21$ | $\$ 26.33$ | $\$ 14.35$ | $\$ 11.01$ | $\$ 10.29$ |

(b) Complete the below amortization schedule for the first three mortgage payments.

For each entry, round to nearest penny. Show how you computed the Interest Paid for Month 1:

|  | Monthly Payment | Interest Paid | Paid on Principal | Remaining Balance |
| :--- | :---: | :---: | :---: | :---: |
|  | (N/A) | (N/A) | (N/A) | $\$ 120,000$ |
| Month 1 |  |  |  |  |
| Month 2 |  |  |  |  |
| Month 3 |  |  |  |  |

