

Validation against published sources



MortgageMath
Precise Loan Amortization in Python

mortgagemath 0.7.0 · rendered 2026-05-06

Every fixture in the table below reproduces **every** value its source publishes, to the cent. The library follows a strict policy: if any published value diverges, the fixture stays out. The six parameter columns show the exact LoanParams settings required to match each source — the same six knobs documented in the *at-a-glance* vignette.

Validated fixtures

| Source | Loan | Day | Bal | Rnd | Cmp | Freq | ARM |
|---------------------------|-----------------------------------|--------|-----|-----|----------------|------|--------|
| Arcones SOA FM § 4.1 Ex 4 | \$20k / 8% / 12yr | 30/360 | RE | HU | A | A | — |
| BCC Brescia IT | \$200k / 5.65% / 10yr | 30/360 | RE | HU | M | M | — |
| Broverman MIC 2.7(a) | \$12k / 12% / 3yr | 30/360 | RE | HU | M | M | — |
| Broverman MIC 2.7(b) | \$12k / 15% / 4yr | 30/360 | RE | HU | M | M | — |
| CFPB H-25(B) | \$162k / 3.875% / 30yr | 30/360 | RE | HU | M | M | — |
| CFPB IO Sample | \$211k / 4% / 30yr | 30/360 | RE | HU | M | M | — |
| eCampus § 4.3 Pearline | \$10k / 10% / 4yr | 30/360 | RE | HU | A | A | — |
| eCampus § 4.3 Erika | \$32.6k / 4.83% / 9yr | 30/360 | RE | UP | M | M | — |
| eCampus § 4.3 Johnetta | \$20.2k / 3.53% / 8yr | 30/360 | RE | HU | M | M | — |
| eCampus § 4.4.1 T1 | \$297.5k / 3.8% / 3yr, 20yr amort | 30/360 | RE | HU | j ₂ | Q | — |
| eCampus § 4.4.1 renew | \$265.8k / 2.5% / 17yr | 30/360 | RE | HU | j ₂ | Q | — |
| FNMA § 1103 | \$25M / 5.5% / 10yr, 30yr amort | A/360 | RE | HU | M | M | — |
| FHLBB 1935 Plan A | \$3k / 6% / 139mo | 30/360 | CP | HU | M | M | — |
| Geltner Ch 20 | \$1M / 12% / 30yr | 30/360 | CP | HU | M | M | — |
| Goldstein § 10.3 | \$563 / 12% / 5mo | 30/360 | CP | HU | M | M | — |
| JHF Flat 35 | \$20M / 1.5% / 30yr | 30/360 | RE | HU | M | M | — |
| Las Positas § 8.05 Ex 1 | \$15k / 9% / 5yr | 30/360 | RE | UP | M | M | — |
| Las Positas § 8.05 Ex 3 | \$18k / 2% / 5yr | 30/360 | RE | UP | M | M | — |
| LoanKeisan JP | \$30M / 1% / 30yr | 30/360 | RE | DN | M | M | — |
| MoneyVox FR | \$10k / 5% / 1yr | 30/360 | RE | HU | M | M | — |
| MS State P3920 | \$100k / 7% / 30yr | 30/360 | RE | HU | M | M | — |
| Olivier Chans T1 | \$350.1k / 4.9% / 3yr, 20yr amort | 30/360 | RE | HU | j ₂ | M | — |
| Olivier Chans renew | \$316.6k / 5.85% / 17yr | 30/360 | RE | HU | j ₂ | M | — |
| OpenStax § 6.12.110 | \$132.7k / 4.8% / 30yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.100.1 | \$18.3k / 6.75% / 4yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.100.2 | \$41.6k / 3.9% / 6yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.110 | \$153.9k / 4.21% / 20yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.114 | \$159.2k / 5.75% / 30yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.36 | \$23.7k / 4.76% / 5yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.78.1 | \$17.9k / 7.5% / 10yr | 30/360 | RE | UP | M | M | — |
| OpenStax AK 6.78.2 | \$33.8k / 4.3% / 20yr | 30/360 | RE | UP | M | M | — |
| OpenStax § 6.8 car | \$28.5k / 3.99% / 5yr | 30/360 | RE | UP | M | M | — |
| OpenStax § 6.8 home | \$136.7k / 5.75% / 15yr | 30/360 | RE | UP | M | M | — |
| ProEducate cap | \$65k / 10% / 30yr | 30/360 | RE | HU | M | M | 1, cap |
| RBC Acc Bi-Weekly | \$350k / 5% / 25yr | 30/360 | RE | HU | j ₂ | BW | — |
| Reg Z H-14 | \$10k / 17.41% / 30yr | 30/360 | RE | HU | M | M | 14 |
| Skinner § 42 Ex 1 | \$1k / 6% / 15yr | 30/360 | RE | HU | A | A | — |
| Skinner § 42 Ex 3 piano | \$500 / 6% / 5yr | 30/360 | RE | HU | A | M | — |
| Solution Bank IT | \$200k / 7% / 30yr | 30/360 | RE | HU | M | M | — |
| Synthetic HALF_EVEN | \$100k / 4.80% / 30yr | 30/360 | RE | HU | M | M | — |
| Synthetic HALF_UP | \$100k / 4.80% / 30yr | 30/360 | RE | HU | M | M | — |
| Synthetic ROUND_UP | \$100k / 4.80% / 30yr | 30/360 | RE | UP | M | M | — |
| TI BA II Plus | \$120k / 6.125% / 30yr | 30/360 | RE | HU | M | M | — |
| Tistory KR | \$300M / 4% / 30yr | 30/360 | RE | HU | M | M | — |

| Source | Loan | Day | Bal | Rnd | Cmp | Freq | ARM |
|-------------------------|----------------------|--------|-----|-----|-----|------|-----|
| Wikipedia mortgage calc | \$200k / 6.5% / 30yr | 30/360 | RE | UP | M | M | — |
| 0% Promo | \$999 / 0% / 2yr | 30/360 | RE | HU | M | M | — |

46 fixtures total.

Column codes. Day: 30/360 US residential, A/360 Actual/360 US commercial. Bal: RE round-each-balance, CP carry-precision. Rnd: UP ROUND_UP, DN ROUND_DOWN, HU ROUND_HALF_UP, HE ROUND_HALF_EVEN. Cmp: M monthly, j₂ semi-annual (Canadian *Interest Act* §6), A annual. Freq: M SM BW W Q A (monthly to annual). ARM: count of RateChange entries; cap indicates at least one payment_cap_factor. A dash is fully fixed-rate.

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