Problem 2

> $Borrow := 500000$

$$Borrow := 500000 \quad (1)$$

> $i := \frac{.06}{12}$

$$i := 0.005000000000 \quad (2)$$

> $owe := (1+i)^{30\cdot 12}\cdot 500000$

$$owe := 3.011287606\ 10^{6} \quad (3)$$

> $s := \frac{\left((1+i)^{30\cdot 12}-1\right)}{\mathrm{i}}$

Payment*s=owe

$$s := 1004.515042 \quad (4)$$

> $Payment := \frac{owe}{s}$

$$Payment := 2997.752627 \quad (5)$$

> $owe5 := (1+i)^{5\cdot 12}\cdot \mathrm{Borrow}$

$$owe5 := 6.744250765\ 10^{5} \quad (6)$$

> $Paid5 := \frac{\left((1+i)^{5\cdot 12}-1\right)}{\mathrm{i}}\cdot Payment$

$$Paid5 := 2.091532926\ 10^{5} \quad (7)$$

> $B5 := owe5 - Paid5$

$$B5 := 4.652717839\ 10^{5} \quad (8)$$

> $i2 := \frac{.04}{12}$

$$i2 := 0.003333333333 \quad (9)$$

> $s2 := \frac{\left((i2+1)^{25\cdot 12}-1\right)}{\mathrm{i2}}$

$$s2 := 514.1294665 \quad (10)$$

> $owe30 := \left((1+i2)^{25\cdot 12}\right)\cdot B5$

$$owe30 := 1.262638231\ 10^{6} \quad (11)$$

> $\mathrm{Payment2} := \frac{owe30}{s2}$

$$Payment2 := 2455.876026 \quad (12)$$

Problem 3.

> $\mathrm{i} := \left(1+\frac{.06}{365}\right)^{\frac{365}{12}} - 1$

$$i := 0.005012121 \quad (13)$$

> $B := \frac{\left((1+i)^{15\cdot 12}-1\right)}{\mathrm{i}}\cdot 1000$

(14)

$$B := 2.911795168\ 10^{5} \quad \textbf{(14)}$$

Problem 4. Accumulation equals

B=1000(1.06)^(29)+1000(.98)(1.06)^(28)+1000(.98)^2(1.06)^(27)+...+1000(.98)^29(1.06)^0
=(.98)^(29)1000[(1.06/.98)^(29)+(1.06/.98)^(28)+(1.06/.98)^(27)+...+1)

> $x := \frac{1.06}{.98}$

$$x := 1.081632653 \quad \textbf{(15)}$$

> $B := \frac{(x^{30} - 1)}{x - 1} \cdot 1000 \cdot .98^{29}$

$$B := 64975.08561 \quad \textbf{(16)}$$

> $\frac{.06}{365}$

$$0.0001643835616 \quad \textbf{(17)}$$

Problem 34.

> $i := \frac{.084}{12}$

$$i := 0.007000000000 \quad \textbf{(18)}$$

> $Owe := (1 + i)^{15 \cdot 12} \cdot 149500$

$$Owe := 5.247420798\ 10^{5} \quad \textbf{(19)}$$

> $s := \frac{((1 + i)^{15 \cdot 12} - 1)}{i}$

$$s := 358.5686381 \quad \textbf{(20)}$$

> $payment := \frac{owe}{s}$

$$payment := 8398.078599 \quad \textbf{(21)}$$

Problem 36

> $i := \frac{.06}{12}$

$$i := 0.005000000000 \quad \textbf{(22)}$$

> $solve\left(\frac{((1 + i)^{12 \cdot n} - 1)}{i} \cdot 100 = 38000, n\right)$

$$17.78950502 \quad \textbf{(23)}$$