

Key

Use the completed check register and bank statement to help reconcile your check book.

MEMBER STATEMENT

Your Credit Union
Anyplace USA

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Thomas B. Anderson
2063 Pleasant Road
Anywhere, USA 12345

Statement Closing Date
September 30, 20XX

PREMIUM SHARE DRAFT ACCOUNT

Beginning Balance on August 30, 20XX	\$ 500.00
Deposits and other additions	+590.00
Checks paid and other subtractions	-122.88

Trans Date	Description	Debits	Credits	New Balance
8/30	Beginning balance			500.00
9/01	✓ Check No. 6801	55.63		444.37
9/04	✓ ACH: Payroll		235.00	679.37
9/10	✓ Check No. 6803	25.00		654.37
9/17	✓ ATM: Withdrawal S51491 6	15.50		638.87
9/18	✓ ACH: Payroll		355.00	993.87
9/23	✓ ACH: Energy Plus Utility	26.75		967.12
9/30	Closing balance			967.12

ITEM NO.	DATE	TRANSACTION DESCRIPTION	SUBTRACTIONS		✓	FEE	ADDITIONS		BALANCE	
			AMOUNT OF PAYMENT				AMOUNT OF DEPOSIT		500	00
6801	9/1	Athletic Shoe Co. Running shoes	55	63	✓				55	63
									444	37
	9/4	Work paycheck Direct deposit			✓		235	00	235	00
									679	37
6802	9/6	Food 'n Shop Groceries	22	36					22	36
									657	01
6803	9/10	Credit Union Cash	25	00	✓				25	00
									632	01
	9/17	ATM Cash	15	00	✓	.50			15	50
									616	51
	9/18	Work paycheck Direct deposit			✓		355	00	355	00
									971	51
	9/23	Energy Plus Utility Electric bill autopay	26	75	✓				26	75
									944	76
6804	9/28	Aria Dayson viola lessons	23	00					23	00
									921	76
	9/28	Best-Mart Refund check					35	50	35	50
									957	26

1) Show the steps that you take to reconcile your check book.

register:
957.26

967.12
+ 35.50
- 45.36

957.26

bank balance
+ outstanding deposit
- outstanding withdrawal

new balance

2) What is your statement balance?

\$967.12

3) What is the sum of your outstanding deposits?

\$35.50

4) What is the sum of your outstanding withdrawals?

\$45.36

Calculate the simple interest earned from each of the following investments. Round to the nearest cent.

$$I = Prt$$

5) \$5600 at 7% for 3 years

$$I = 5600 (.07)(3)$$

$$I = \$1,176$$

6) \$10,000 at 12% for 6 months

$$I = 10000 (.12)\left(\frac{1}{2}\right)$$

$$I = \$600$$

7) \$18,100 at 10.2% for 5 years

$$I = 18100 (.102)(5)$$

$$I = \$9,231$$

8) \$4,900 at 8.1% for 100 days

$$I = 4900 (.081)\left(\frac{100}{365}\right)$$

$$I = \$108.74$$

9) \$7,500 at 6.3% for 2.5 years

$$I = 7500 (.063)(2.5)$$

$$I = \$1,181.25$$

10) \$3,200 at 4.8% for 8 weeks

$$I = 3200 (.048)\left(\frac{8}{52}\right)$$

$$I = \$23.63$$

11) What amount must be invested at 5.7% for 3 years to earn \$651.51 in simple interest?

$$\frac{651.51}{(.057)(3)} = \frac{P(.057)(3)}{(.057)(3)}$$

$$P = \$3,810$$

12) Lim's investment of \$2,100 earned \$404.25 in simple interest after 3.5 years. What is the interest rate?

$$\frac{404.25}{(2100)(3.5)} = \frac{2100(r)(3.5)}{2100(3.5)}$$

$$r = .055$$

$$r = 5.5\%$$

13) For how long must Kimberly invest \$4130 at 3.75% for it to earn \$929.25 in simple interest?

$$\frac{929.25}{4130(.0375)} = \frac{4130(.0375)(t)}{4130(.0375)}$$

$$6 \text{ years} = t$$

$$A = P \left(1 + \frac{r}{n}\right)^{nt}$$

Calculate the final balance using compound interest. Round to the nearest cent.

14) \$26,000 at 9.5% compounded monthly for 8 years

$$A = 26000 \left(1 + \frac{.095}{12}\right)^{12 \cdot 8}$$

$$A = \$55,429.06$$

15) \$5,600 at 7% for 3 years - biweekly

$$A = 5600 \left(1 + \frac{.07}{26}\right)^{26 \cdot 3}$$

$$A = \$6,906.65$$

16) \$10,000 at 12% compounded quarterly 6 years

$$A = 10000 \left(1 + \frac{.12}{4}\right)^{4 \cdot 6}$$

$$A = \$20,327.94$$

17) \$7,500 at 6.3% compounded semi-annually for 2 years

$$A = 7500 \left(1 + \frac{.063}{2}\right)^{2 \cdot 2}$$

$$A = \$8,490.60$$

18) \$20,000 is invested at 4.75% compounded monthly for 3 years. Calculate:

i) the balance at the end of the third year.

$$A = 20,000 \left(1 + \frac{.0475}{12}\right)^{12 \cdot 3}$$

$$A = \$23,056.58$$

ii) What is the total interest earned?

$$23,056.58 - 20,000$$

$$I = \$3,056.58$$

19) What is the **principal** that must be invested at compound interest to reach each of the following balance amounts? Answer to the nearest cent. (Remember to round at the end, not during the process)

i) \$8,000 in 4 years at 5% compounded monthly.

$$8000 = \frac{P \left(1 + \frac{.05}{12}\right)^{12 \cdot 4}}{\left(1 + \frac{.05}{12}\right)^{12 \cdot 4}}$$

$$P = \$6,552.57$$

ii) \$14,200 in 3 years at 7.2% compounded bi-weekly

$$14,200 = \frac{P \left(1 + \frac{.072}{26}\right)^{26 \cdot 3}}{\left(1 + \frac{.072}{26}\right)^{26 \cdot 3}}$$

$$P = \$11,444.86$$

20) What is the ^{A-P} interest earned when \$13,500 is invested at 7% compounded quarterly for 3 years.

$$A = 13500 \left(1 + \frac{.07}{4}\right)^{4 \cdot 3}$$

$$I = \$3,124.43$$

$$A = 16,624.43 - 13500$$

21) The owners of Wallykazam wants to invest \$12,000 for four years. They are to choose between Account A that earns 5% simple interest per year or Account B that earns 5% interest compounded annually.

i) Which account should they choose?

Account A

$$I = Prt$$

$$I = 12000(.05)(4)$$

$$I = 2,400$$

Account B

$$A = 12000 \left(1 + \frac{.05}{1}\right)^{1 \cdot 4}$$

$$A = 14,586.08$$

$$\underline{-12,000.00}$$

$$I = 2,586.08$$

They should choose Account B.

ii) How much more do they earn by choosing the better account?

They earn \$186.08 more with B

$$\begin{array}{r} 2586.08 \\ -2400.00 \\ \hline 186.08 \end{array}$$

Calculate using continuous compound interest. Round to the nearest cent.

$$A = Pe^{rt}$$

22) Kristin invests a sum of money in a savings account with a fixed annual interest rate of 5.85% compounded continuously. After 10 years, the balance reaches \$11,075.09. What was the amount of the initial investment?

$$A = 11,075.09$$

$$r = .0585$$

$$t = 10$$

$$P = ?$$

$$\frac{11,075.09}{e^{(.0585)(10)}} = \frac{Pe^{(.0585)(10)}}{e^{(.0585)(10)}}$$

$$P = \$6169.997$$

$$P = \$6170$$

23) Jack invests a sum of money in a savings account with a fixed annual interest rate of 2.97% compounded continuously. After 7 years, the balance reaches \$2,618.53. What was the amount of the initial investment?

$$\frac{2618.53}{e^{(.0297)(7)}} = P \frac{e^{(.0297)(7)}}{e^{(.0297)(7)}}$$

$$P = \$2,127.00$$

24) Ashley invests \$2,662 in a savings account with a fixed annual interest rate of 3.06% compounded continuously. What will the account balance be after 10 years? Round to the nearest cent.

$$A = 2,662 e^{(.0306)(10)}$$

$$A = \$3,614.95$$

25) Jimmy invests \$6,957 in a savings account with a fixed annual interest rate of 5.16% compounded continuously. What will the account balance be after 8 years? Round to the nearest cent.

$$A = 6957 e^{(.0516)(8)}$$

$$A = \$10,512.32$$