

In Summary

Key Ideas

- When deciding whether to rent, buy (with or without financing), or lease, each situation is unique. A cost and benefit analysis should take everything into account.
 - Costs include initial costs and fees, short-term costs, long-term costs, disposable income, the cost of financing, depreciation and appreciation, penalties for breaking contracts, and equity.
 - Benefits include convenience, commitments, flexibility, and personal needs or wants, such as how often you want to buy a new car.
- Since each situation is unique, it is impossible to generalize about whether renting, leasing, or buying is best.

Need to Know

- When renting, leasing, and buying, you often need to make payments up front. Some payments go toward the overall cost, such as a down payment on a house or a lease deposit and the first and last month's rent. Other deposits, such as a rental damage deposit, are refunded at a later date.
- Appreciation and depreciation affect the value of a piece of property and should be considered when making decisions about renting, buying, or leasing, based on the particular situation. They are usually expressed as a rate per annum.
- Equity can make buying a house a form of investment.

HOMWORK...

p. 568: #4, 5, 6, 10, 11

5. Susie purchased a limited edition print of a Robert Bateman painting for \$7800. Bateman's prints appreciate, on average, 1.5% annually.

- How long will Susie need to keep the print until its value exceeds \$10 000?
- About how long will Susie need to keep the print until its value has doubled?

a) 7800×1.015

9188.001712
9325.821737
9465.709063
9607.694699
9751.81012
9898.087272
10046.55858

17 years

b) $\frac{72}{1.5}$

9465.709063
9607.694699
9751.81012
9898.087272
10046.55858

72/1.5 = 48 years ..

6. Jake and Archie are looking for places to live.
- Jake decides to rent a house for \$1400 per month.
 - Archie buys a house for \$189 900, with a down payment of 10%. The bank has offered Archie a 20-year mortgage for the remainder of the cost, at 4% compounded semi-annually, with payments every two weeks.
- Jake and Archie both move after 5 years. Archie's house has depreciated by 2% per year. Compare Jake's and Archie's housing costs.

Jake

1400*12*5
84000

N=520 ← 12*20
 I%=4
 PV=170910 ← 189900*0.90
 * PMT=-476.215394
 FV=0
 P/Y=26
 C/Y=2
 PMT: END BEGIN

Payment

Owe the bank after 5 years

Bank wants →

Paid off bank

N=130
 I%=4
 PV=170910
 PMT=-476.215394
 * FV=-139927.2952
 P/Y=26
 C/Y=2
 PMT: END BEGIN

Depreciation

189900*0.98
 186102
 Ans*0.98
 182379.96
 178732.3608
 175157.7136
171654.5593

SEV →

5 years

171654.56-139927.30
 31727.26
 Ans-18990
12737.28

Paid back my payment

back!

10. A company has spent \$70 000 for car rentals over 2 years. The company's financial officer wants to determine if the company should continue to rent or if it should buy or lease two vehicles instead.
- A new car costs \$32 000. A 5% down payment is required. The rest can be financed at 3.6%, compounded monthly, for 2 years. Assume depreciation of 40% a year and monthly payments.
 - A 2-year lease for a car requires a down payment of \$2000 and monthly payments of \$770.
- a) Determine the costs of each option: renting, buying, and leasing.
 b) Recommend a course of action for the company. Justify your recommendation.

*Buy * Down*

```

N=24
I%=3.6
PV=30400
PMT=-1314.7120...
FV=0
P/Y=12
C/Y=12
PMT: [ ] BEGIN
    
```

*30000 * 0.95 Payment*

```

1314.71*24+0.05(
32000)
33153.04
    
```

SELL

```

32000*0.6      19200
Ans*0.6        11520
    
```

Cost no vehicle

```

33153.04-11520
21633.04
    
```

x

Lease

```

2000+770*24
20480
    
```

11. A landscaping company needs a small tractor to use from March to November.
- Predict whether the company should rent, buy, or lease, based on the costs described below. Justify your prediction.
 - A new tractor costs \$18 600 and can be financed at 5.6%, compounded monthly, for 9 months.
 - Renting a tractor will cost \$60 per day.
 - Leasing costs are \$2000 down and \$1345 per month for 9 months.
 - Verify your prediction.
 - What factors might make renting the best option? Explain.

Buy

```
N=9
I%=5.6
PV=18600
PMT=-2115.1882...
FV=0
P/Y=12
C/Y=12
PMT: [ ] [ ] [ ] BEGIN
```

```
9*2115.19
19036.71
```

Rent

```
60*275
16500
```

Lease

```
2000+1345*9
14105
```

Ready for the test??? REVIEW Time...

Chapter 8: Investing Money

- mid chapter review p. 481
- chp review p. 507
- chp self test p. 506

Chapter 9: Borrowing Money

- mid chapter review p. 539
- chp review p. 573
- chp self test p. 572

✂ Cumulative Review...Chp. 8/9 p. 576

Simple Interest

$$I = Prt$$

$$A = P + I$$

$$A = P + Prt$$

$$A = P(1 + rt)$$

Compound Interest

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

$$I = A - P$$

Present Value

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

Rule of 72 and Rate of Return

$$\text{Doubling Time} = \frac{72}{\text{Rate}}$$

$$\text{ROR} = \frac{\text{\$earn}}{\text{\$invested}} \times 100\%$$

TVM-Solver

N =
 I % =
 PV =
 PMT =
 FV =
 P / Y =
 C / Y =
 PMT : END BEGIN