

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.

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

a)

doubled?

9188.001712
9325.821737
9465.709063
9607.694699
9751.81012
9898.087272
10046.55858

17 years

b)

72

9465.709063
9607.694699
9751.81012
9898.087272
10046.55858
72/1.5

48

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=240
I% = 4
PV = 170910
PMT = -1032.7176...
FV = 0
P/Y = 12
C/Y = 2
PMT: [ ] [ ] BEGIN
```

Payment

```
N=60
I% = 4
PV = 170910
PMT = -1032.7176...
FV = -139927.2952
P/Y = 12
C/Y = 2
PMT: [ ] [ ] BEGIN
```

Owe the bank after 5 years

Bank wants

Paid off bank

Depreciation

```
189900*0.98    186102
Ans*0.98       182379.96
               178732.3608
               175157.7136
               171654.5593
```

SELL

5 years

```
171654.56-139927.30    31727.26
Ans-189900            12737.26
```

Paid back my payment

12737.26

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 * Own*

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

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

SELL

```
32000*0.6 19200
Ans*0.6 11520
```

```
33153.04-11520
21633.04
```

*Cost
not
vehicle*

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