

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.

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 months' rent. Other deposits, such as rental damage deposit may be refunded at a later date.

**Example 1:** Mark is a student at UBC and has been hired to complete a 16-week work term about 50 km away in White Rock. He is considering three options:

Option A: Rent a room in White Rock for \$400 per week. The cost include all utilities and meals.

Option B: Lease an apartment in White Rock for \$1200 per month. He must pay first and last months' rent up front, plus a refundable damage deposit of \$2000. He also needs to pay about \$200 per month for all utilities.

Option C: Buy a used car for \$12 000, on credit, with regular monthly payments of \$1000 and interest at 3.2%, compounded monthly. He would live in Vancouver with his parents for free and commute to White Rock daily. Driving costs such as gas, insurance, and maintenance would be about \$250 per week. The car will depreciate in value by 20% each year.

Which option should he choose, and why?

Option A  
 $\$400(16) = \$6400$

Option B  
 $\$1200(4) + \$200(4) = \$5600$   
 rent                      utilities (no damage)

Option C  
 The number of payments is unknown and need to know this to determine the total payment on car. Using calc. (APPS → TVM solver)  $N = 12.212$   
 so total cost is

$$12.212(\$1000) + 16(\$250) = \$16212.$$

Any option is reasonable, but option A is cheapest.

**Example 2:** A new branch office of a bank needs 30 computers, a server, and 10 printers. The bank's policy requires upgrades and renewals every 3 years because the value of computer equipment depreciates at an annual rate of 40%. The manager investigated the costs of purchasing and leasing, as shown in the chart.

Equipment	Lease (\$) <i>total</i>	Purchase (\$) <i>total</i>
30 computers	6860 per year	24 000
1 server	2400 per year	6 000
10 printers	315 per year	1 200

Would it be better for the company to purchase or lease? Explain.

purchase

$$24000 + 6000 + 1200$$

$$= \$31200$$

lease

$$(6860 \times 3) + 2400(3) + 315(3)$$

$$= \$28725$$

leasing is better  $\Rightarrow$  cheaper

**Example 3:** The 10-year old hot water heater in Tom's home stopped working, so he needs a new one. Tom works for minimum wage. After paying his monthly expenses, he has \$35 disposable income (the amount of income someone has available to spend after all regular expenses and taxes have been deducted) left. He has an unused credit card that charges 18.7%, compounded daily. He has two options:

Option A: Tom could lease one for \$17.25 per month. This would include parts and service.

Option B: He could buy one for \$712.99, plus an installation fee of \$250, using his credit card. He could afford to pay no more than \$35 each month.

a) What costs are associated with buying and leasing?

b) What do you recommend for Tom?