## Finance

## Comparing Financial Options: Buy, Rent or Lease

1. A landscaping company needs a small tractor to use from March to November. Based on the costs below, should the company buy, rent or lease?
A) A new tractor costs $\$ 18600$ and can be financed at $5.6 \%$, compounded monthly, with monthly payments for 9 months.

$$
\begin{array}{ll}
\mathrm{N}= & \mathrm{FV}= \\
\mathrm{I}= & \mathrm{P} / \mathrm{Y}= \\
\mathrm{PV}= & \mathrm{C} / \mathrm{Y}= \\
\mathrm{PMT}= & \mathrm{END}
\end{array}
$$

The monthly payment on the loan is $\qquad$ .

The total paid for the tractor is $\qquad$ .
B) Renting a tractor will cost $\$ 60$ a day (assume 20 working days per month)

The total cost to rent the tractor for 9 months is $\qquad$ .
C) Leasing costs are $\$ 2000$ down and $\$ 1345$ per month for 9 months.

The total cost to lease the tractor for 9 months is $\qquad$ .
2. Joe is a house painter and needs scaffolding for his next job. Consider his options below:
A) Buy new scaffolding for $\$ 1200+12 \%$ PST/GST.

Cost: $\qquad$
B) Rent steel scaffolding for $\$ 340$ per month.

Cost: $\qquad$
C) Buy used scaffolding at $60 \%$ of the purchase price when new.

Cost: $\qquad$

If the job will take 3 months to complete, which of the options is better for Joe? If the job will take 6 months to complete, which of the options is better for Joe?
3. 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 monthly payments.
Jake and Archie both move after 5 years. Compare Jake's and Archie's housing costs.
Jake:
Total cost for 5 years: $\qquad$
Archie:
a) What is the down payment, and what is the value of the mortgage?
b) What is the monthly payment?
$\mathrm{N}=$
$\mathrm{FV}=$
I =
$\mathrm{P} / \mathrm{Y}=$
$\mathrm{PV}=$
$\mathrm{C} / \mathrm{Y}=$
PMT =
END BEGIN
c) What is the total amount paid on the mortgage after 5 years?
d) What is the balance of the mortgage (amount still owing) after 5 years?

| $\mathrm{N}=$ | $\mathrm{FV}=$ |
| :--- | :--- |
| $\mathrm{I}=$ | $\mathrm{P} / \mathrm{Y}=$ |
| $\mathrm{PV}=$ | $\mathrm{C} / \mathrm{Y}=$ |
| $\mathrm{PMT}=$ | END BEGIN |

e) How much will Archie profit after selling his house and paying off the remainder of his mortgage?
f) What is the total cost to Archie after 5 years (including the down payment and mortgage payments, less the profit from the sale)?

Total cost for 5 years: $\qquad$
Are there any other costs associated with buying/owning/selling a house that were not considered?

