

divide by 12 in order to set aside enough each month to pay for them.

6) Balance the budget

- Add up your income and expenditure columns - hopefully your total income is greater than your expenditure! If it is then this leftover income should be put aside into savings. You will then be left with a balanced budget, i.e. you know exactly how all your income will be used.

7) See where you can cut

- You may want to go back and review your expenses to see what you can reduce or cut out. This will have to be done if your expenses are greater than your income in order to be able to balance the budget and not fall into debt.

8) Follow your spending plan

- In order for a budget to work, it needs to be followed closely. Make sure to regularly record your actual income and expenditure and compare it with your budget forecast and adjust your budget and spending habits if necessary.

Example 7

Kevin works as an engineer and his take-home pay per fortnight is \$3538.46. He also earns \$120 a week as a maths tutor in the evenings. His expenses are given in the table below.

- What is Kevin's monthly income?
- How much does Kevin have left over to put into his savings each month?
- If Kevin wants to use his savings to buy a car costing \$16 000, how long will it take him to save this amount (to the nearest month)?

Example 7 (contd.)

Item	Amount \$ per month
Rent	1820
Phone	69
Internet	79
TV	97
Food	520
Clothing	230
Entertainment	460
Other expenses	195

Answer:

a) Kevin's take home pay per week:

$$= \frac{\$3538.46}{2} = \$1769.23$$

⇒ Total income per week:

$$= \$1769.23 + \$120 = \$1889.23$$

⇒ Total income per year:

$$= 52 \times \$1889.23 = \$98\,239.96$$

∴ His total income per month:

$$= \frac{\$98,239.96}{12} = \$8186.66$$

(rounded to nearest cent)

b) Kevin's total expenses per fortnight:

$$= \$1820 + \$69 + \$79 + \$97 + \$520 + \$230 + \$460 + \$195 = \$3470$$

⇒ His total income per month:

Example 7 (contd.)

$$= \frac{26 \times \$3470}{12} = \$7518.33$$

(rounded to nearest cent)

$$\therefore \text{His savings per month:}$$

$$= \$8186.66 - \$7518.33$$

$$= \mathbf{\$668.33}$$

c) Time to save \$16,000:

$$= \frac{\$16,000}{\$668.33} = 23.94 \text{ months}$$

$\therefore$ **24 months, i.e. 2 years**

Example 8

Jessica is a school student with a part-time job working in a supermarket. She earns \$120 per week from her part-time job but also earns \$60 a week by babysitting for her neighbours. Her travel expenses are \$21, lunch expenses are \$16, entertainment expenses are \$18 and miscellaneous expenses are \$44 on average a week.

- How much does Jessica save a week towards her holidays?
- Prepare a weekly budget for Jessica.
- What percentage of her total income does she save?
- How long will it take her to save \$1500 that she needs for her holidays to the nearest week?

Example 8 (contd.)

Answer:

a) Jessica's savings = total income
 $= \text{total income} - \text{expenses}$
 $= (120 + 60) - (21 + 16 + 18 + 44)$
 $= \$180 - \99
 $= \mathbf{\$81}$

b) Jessica's Weekly Budget:

Income	\$	Expenses	\$
Supermarket	120	Travel	21
Babysitting	60	Lunch	16
		Entertainment	18
		Misc.	44
		Savings	81
Total	180	Total	180

c) Jessica's savings as a percentage of her income:

$$\frac{\text{Savings}}{\text{Income}} \times 100 = \frac{\$81}{\$180} \times 100$$

$$0.45 \times 100 = \mathbf{45\%}$$

a) Time to save \$1500:

$$= \frac{\$1500}{\$81} = 18.52 \text{ weeks}$$

$\therefore$ **19 weeks**

INVESTING MONEY

Investing money means to put money into an asset with the expectation of it increasing in value, receiving dividends, and/or interest earnings. A good investor will perform some research and analysis before deciding on an investment. Most or all forms of investment involve some form of risk, such as investment in shares and property. These risks should be evaluated before an investment is made then

Example 14 (contd.)

- b) the total fee she will pay her broker.☐
 c) the total amount she will actually pay

Answer:

- b) Max. amount available to spend on shares = total amount – fee

$$= \frac{\$3000 - \$20}{1 + 0.02}$$

$$= \frac{\$2980}{1.02} = \$2921.57$$

So, maximum number of shares she can buy =

$$\frac{\$2921.57}{\$2.50 \text{ per share}} = 1168.63$$

∴ Maximum number of shares she can buy is **1168**.
(need to round down to nearest whole number)

- c) Actual value of shares bought:

$$1168 \times \$2.50 = \$2920$$

Brokerage commission on share value:

$$\$2920 \times 0.02 = \$58.40$$

∴ Total brokerage fee:

$$\$20 + \$58.40 = \mathbf{\$78.40}$$

- d) Total amount spent = value of shares bought + brokerage fee

$$= \$2920 + \$78.40$$

$$= \mathbf{\$2998.40}$$

Example 15

Jack wants to buy 200 shares in a bank which is currently trading at \$74.25 per share. His broker charges a flat fee of \$29 per trade. He also has to pay stamp duty on the cost of the shares of \$0.60 per \$100 or part thereof.

- a) Calculate the total amount Jack will pay for the shares
 b) Three months after buying the shares, the company pays out a dividend of \$1.75 per share. How much does Jack receive and what is the percentage yield of the shares if their market value is then \$76?

Answer:

- a) Total amount due = cost of shares + brokerage + stamp duty

Cost of shares:

$$= 200 \times \$74.25 = \$14\,850$$

Stamp duty:

$$= \frac{\$14\,850}{100} \times \$0.60$$

$$= 148.5 \times \$0.60$$

However, as stamp duty of \$0.60 is due on every \$100 **plus** any part of \$100, we need to roundup to the nearest whole number, hence:

Stamp duty:

$$= 149 \times \$0.60 = \$89.40$$

∴ Total amount due:

$$= \$14\,850 + \$29 + \$89.40$$