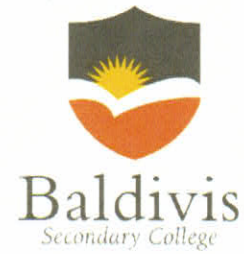# Year 11 Essentials

Practical Application – Collaborative

2 lessons in-class

James moved out of his parents' house at 24 years old, with $12,500 in his bank account. He works two jobs so he has money left over after he pays for his rent, bills, car repayment, and groceries. He lives in a shared house with 2 other adults. James pays $150 a week on rent, $50 more a week than the others because he sleeps in the master bedroom. Their weekly rent is $350 for a 3-bedroom, 2-bathroom house.

James' first job is a car salesman at Car Giant. He works Monday – Thursday, 8 hours a day earning a salary of $35 000 a year, plus he receives 1% commission for each car he sells.

James' also works as a barista for local coffee shop called Coffee Co., he usually works Friday – Sunday, earning $23.50 an hour.

Part One: Rent and Bills

James bought a car when he was 20 years old for $15, 000. He borrowed $10 000 from the bank at a rate of 2.3% simple interest for 5 years.

- If GST is included in the purchase price of his car, how much GST is included in the price?

$$\frac{15000}{11} = \$1363.64$$

- How much money does James have to pay the bank at the end of 5 years... if

$$Simple\ Interest = Principal \times \frac{Rate}{100} \times Time$$

$$= 10000 \times \frac{2.3}{100} \times 5$$

$$= 1150$$

$10\ 000 + 1150$

$\$11150$

- How much money is James spending a fortnight on his car repayments?

$$5 \times 26 = 130 \ fortnights$$

$$\frac{11150}{130} = \$85.77$$

- James usually spends $250 a month on groceries, how much does he spend a week?

$250 \times 12 = \$3000 / year$

$3000 / 52 = \$57.69 / week$

- If GST was included into the total bill, how much GST is James paying a week on groceries?

$$\frac{57.69}{11} = \$5.24$$

- James and his housemates split the water and electricity bill evenly. The water bill is usually around $225, which is paid 4 times a year. The electricity bill is usually around $375 which is paid 3 times a year. How much does James need to put away each month to pay for water and electricity?

3 people

$225 \times 4 = 900$

$375 \times 3 = \underline{1125}$

2025

$$\frac{2025}{3} = \$675 \text{ per year for James}$$

$= \$56.25$ per month

$$\frac{675}{12} = 56.25$$

Part Two: Occupation

- How much would James earn in March being a car salesman, if he sold 6 cars in the month. 3x cars for $21 000, 2x cars for $28 000 and 1x car for $15 000.

$$\frac{35000}{12} = \$2916.67 \text{ salary}$$

$3 \times 21000 = 63000$

$2 \times 28000 = 56000$

$1 \times 15000 = \underline{15000}$

175000

$$\frac{175000}{100} = \$1750$$

commission

2916.67

$+ 1750$

$\overline{\$4666.67}$ in March.

- How much money would James earn a week being a barista if he worked 8 hours on Friday (with a one-hour break), 5 hours on Saturday (with a half-hour break) and 5 hours on Sunday, (with time and a half pay, and a half an hour break)?

Friday = 8-1 = 7 hours $7 \times 23.50 =$ 164.5

Saturday = 5-0.5 = 4.5 hrs $4.5 \times 23.5 =$ 105.75

Sunday = 5-0.5 = 4.5 hrs $4.5 \times 23.50 \times 1.5 =$ 158.625

                                                  $\$428.88$

- Calculate his total fortnightly pay during the month of March, if he worked every Friday, Saturday and Sunday for the month at Coffee Co (same hours every week).

This March had 15 days of Fri, Sat, Sun,

$428.88 \times 2 = \$857.76$

Part Three: Tax and Superannuation

Australian income tax rates for 2018/2019 (residents)		
Income thresholds	**Rate**	**Tax payable on this income**
$0 – $18,200	0%	Nil
$18,201 – $37,000	19%	19c for each $1 over $18,200
$37,001 – $90,000	32.5%	$3,572 plus 32.5% of amounts over $37,000
$90,001 – $180,000	37%	$20,797 plus 37% of amounts over $90,000
$180,000 and over	45%	$54,097 plus 45% of amounts over $180,000

- If James' Gross pay is $48 700 at Car Giant and $20 000 at Coffee Co. how much tax is he paying?

Total = $48700 + 20000 = 68700$

$Tax = 3572 + 0.325 \times (68700 - 37000)$

$= 3572 + 0.325 \times (31700)$

$= 3572 + 10302.5$

$= \$13\,874.50$

- It is a legal requirement that James' employers also contribute an amount equal to 9.5% of his pay towards superannuation. What amount of superannuation is deposited each year?

$$68700 \times \frac{9.5}{100} = \$6526.50$$

Part Four: James lifestyle

- Calculate how much money, James has left in his bank account at the end of March. Don't forget about his expenses.

Income after tax $68\ 68700 - 13874.5$

$= 54,825.5$

Income in March $= 54\ 825.5 \div 12 = \$4568.79$.

Expenses in March   Rent $= 150 \times 52 \div 12 = \$650$

       Bills $=$ $\$56.25$

       Food $=$ $\$250$

       Car $= 11500 \div 12 =$ $\underline{\$958.33}$

                                 $\$1914.58$

Income – expenses $= 4568.79 - 1914.58$

$= \$2654.21$ extra $12500 + 2654.21 = \$15154.21$

- James needs $7000 in savings to so he can travel to America, how long will it take him to save that much money?

$$\cancel{26}\ \frac{7000}{2654.21} = 2.65\ \text{months}$$

$\Rightarrow$ So 3 months he will have saved the additional $7000.