

WORKSHEET #2 Simple and Compound Interest

Name: _____

- 1** If \$3200 is invested for 9 months at 5% p.a., calculate:
- (a) the amount of simple interest earned
 - (b) the total amount at the end of the term.

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- 2** How long will it take to earn \$500 simple interest, investing \$8500 at 4.25% p.a.?

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- 3** Johnny invested \$60 000 in Ski International debentures. He earned 6.5% p.a. which is paid quarterly. How much interest will he earn over 5 years?

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- 4 Kim has \$18 000 to invest for 2 years. She has the following options: 9
- (a) A term deposit at 4.5% compounded annually.

 - (b) Shares, paying a rate of 4.48% per annum with dividend paid quarterly.

 - (c) A building society account, paying a return of 4.56% per annum with monthly rests.

 - (d) A business venture with guaranteed return of 3.65% p.a. and interest paid daily.

Advise Kim which option to take if all the investments are equally secure.

5 (a) Calculate the compound interest on a term deposit of \$10 000 at the rate of 6% p.a. for 3 years when the investment is compounded

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- (i) annually
- (ii) semi-annually
- (iii) quarterly
- (iv) monthly
- (v) daily.

(b) Which is the best investment option?

- 6 Colin invests \$5000 for 5 years at 5.25% p.a. **Compounding monthly**
 How much more would he collect at the end of the 5-year period if the money invested is compounding monthly rather than compounding annually?

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Compounding yearly

- 7 The table below shows the yearly growth of an investment of \$10 000 over a period of 5 years at 3.75% p.a. interest compounded annually.

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Time (years)	0	1	2	3	4	5
Value (\$)	10 000	10 375	10 764	11 168	11 587	12 021

Graph the value of the investment over time.

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- 8** Chris invests \$20 000 at 6% p.a. with interest compounding annually.
- (a) Complete the table below to show the future value at the end of each year.

No. of years	1	2	3	4	5
Future value					

- (b) Draw a graph of the future value of the investment against time.

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- 9** An interest rate of 4.5% p.a. compounding quarterly is equivalent to what effective interest rate?

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10 Marilyn can invest in two different funds:

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(a) 6% p.a. simple interest

(b) 5.75% p.a. compound interest with monthly rests.

She is inclined to choose the 6% p.a. simple interest because this is a higher value. Is this a wise choice? Explain your answer.