

WorkSHEET 1.1 Simple and compound interest

Name _____

/50

3

- 1 Mary had \$220 in her Christmas Club Account which earned 4% per annum simple interest for the year. Calculate the amount of interest which she earned over the year.

- 2 Tom invested \$500 in a fixed deposit account earning 3.2% p.a. simple interest for three years. How much money would Tom have after the three years?

- 3 Aliena invested \$2500 in a credit union for 18 months earning 6% p.a. simple interest. How much interest should she have accrued?

4

- 4 A bank offered 6% p.a. simple interest on an investment and at the end of three years the interest paid was \$900. What was the original investment?

4

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- 5 Basil invested \$2500 for 36 months and earned \$375 simple interest. What was his yearly interest rate? 6
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- 6 Siobhan has been given \$1000 as a twenty-first birthday present. How long does she need to invest in order to earn \$150 if the bank is offering 5% p.a. simple interest? 5
-
- 7 Having received an inheritance from his late father, Bill invested the money for 5 years at 5.25% simple interest per annum and earned \$5775 in total interest. How much was Bill's inheritance? 4
-

8 Stephen is keen to try investing in bonds at the ANZ bank attracting 3.5% per annum. How much will Stephen have if he buys a \$1500 bond that will mature in 3 years if simple interest is paid?

5

9 Robert has borrowed \$3000 to purchase a laptop computer. The rate of simple interest is 6% per annum. If the interest owing amounts to \$220 then for how long, to the nearest month, would the loan have been taken out?

6

10 Sam has \$10 000 to invest. He has the choice of 2.5% p.a., 3% p.a. or 3.25% p.a. simple interest.

9

(a) Complete the table below to show the interest he would earn over a period of 5 years.

No. of years	1	2	3	4	5
Interest 2.5% p.a.					
Interest 3% p.a.					
Interest 3.25% p.a.					

(b) Draw a graph to represent the interest earned on each investment.

WorkSHEET 1.1 Simple and compound interest

Name _____

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- 1 Mary had \$220 in her Christmas Club Account which earned 4% per annum simple interest for the year. Calculate the amount of interest which she earned over the year.

$$I = \frac{PRT}{100}$$

$$I = ?, \quad P = \$220, \quad R = 4, \quad T = 1$$

$$I = \frac{220 \times 4 \times 1}{100}$$

$$I = \frac{880}{100}$$

$$I = \$8.80$$

3

- 2 Tom invested \$500 in a fixed deposit account earning 3.2% p.a. simple interest for three years. How much money would Tom have after the three years?

$$\text{Amount} = P + I$$

$$I = \frac{PRT}{100}$$

$$I = ?, \quad P = \$500, \quad R = 3.2\%, \quad T = 3 \text{ years}$$

$$I = \frac{500 \times 3.2 \times 3}{100}$$

$$I = \frac{4800}{100}$$

$$I = 48$$

$$\text{Amount} = 500 + 48 = \$548$$

4

- 3 Aliena invested \$2500 in a credit union for 18 months earning 6% p.a. simple interest. How much interest should she have accrued?

$$I = \frac{PRT}{100}$$

$$I = ?, \quad P = \$2500, \quad R = 6\%,$$

$$T = 18 \text{ months} = \frac{18}{12} \text{ years}$$

$$I = \frac{2500 \times 6 \times 18}{100 \times 12}$$

$$I = \$225$$

4

- 4 A bank offered 6% p.a. simple interest on an investment and at the end of three years the interest paid was \$900. What was the original investment?

$$I = \frac{PRT}{100}$$

$$I = \$900, \quad P = ?, \quad R = 6\%, \quad T = 3 \text{ years}$$

$$P = \frac{I \times 100}{R \times T}$$

$$P = \frac{900 \times 100}{6 \times 3}$$

$$P = \$5000$$

4

- 5 Basil invested \$2500 for 36 months and earned \$375 simple interest. What was his yearly interest rate?

$$I = \frac{PRT}{100}$$

$$I = \$375, \quad P = \$2500, \quad R = ?,$$

$$T = 36 \text{ months} = \frac{36}{12} \text{ years} = 3 \text{ years}$$

$$I = \frac{PRT}{100}$$

$$R = \frac{I \times 100}{P \times T}$$

$$R = \frac{375 \times 100}{2500 \times 3}$$

$$R = 5\% \text{ p.a.}$$

6

- 6 Siobhan has been given \$1000 as a twenty-first birthday present. How long does she need to invest in order to earn \$150 if the bank is offering 5% p.a. simple interest?

$$I = \frac{PRT}{100}$$

$$I = \$150, \quad P = \$1000, \quad R = 5, \quad T = ?$$

$$I = \frac{PRT}{100}$$

$$T = \frac{I \times 100}{P \times R}$$

$$T = \frac{150 \times 100}{1000 \times 5}$$

$$T = 3 \text{ years}$$

5

- 7 Having received an inheritance from his late father, Bill invested the money for 5 years at 5.25% simple interest per annum and earned \$5775 in total interest. How much was Bill's inheritance?

$$I = \frac{PRT}{100}$$

$$I = \$5775, \quad P = ?, \quad R = 5.25\%, \quad T = 5 \text{ years}$$

$$P = \frac{I \times 100}{R \times T}$$

$$P = \frac{5775 \times 100}{5.25 \times 5}$$

$$P = \$22\,000$$

4

- 8 Stephen is keen to try investing in bonds at the ANZ bank attracting 3.5% per annum. How much will Stephen have if he buys a \$1500 bond that will mature in 3 years if simple interest is paid?

$$I = \frac{PRT}{100}$$

$$I = ?, \quad P = \$1500, \quad R = 3.5\% \text{ p.a.}, \quad T = 3 \text{ years}$$

$$I = \frac{1500 \times 3.5 \times 3}{100}$$

$$I = \$157.50$$

$$\text{Amount} = \$1500 + 157.50 = \$1657.50$$

5

- 9 Robert has borrowed \$3000 to purchase a laptop computer. The rate of simple interest is 6% per annum. If the interest owing amounts to \$220 then for how long, to the nearest month, would the loan have been taken out?

$$I = \frac{PRT}{100}$$

$$I = \$220, \quad P = \$3000, \quad R = 6\% \text{ p.a.}, \quad T = ?$$

$$I = \frac{PRT}{100}$$

$$T = \frac{I \times 100}{P \times R}$$

$$T = \frac{220 \times 100}{3000 \times 6}$$

$$T = \frac{11}{9} \text{ years}$$

$$= 1 \frac{2}{9} \text{ years}$$

$$= 1 \text{ year } \frac{2 \times 12}{9} \text{ months}$$

$$= 1 \text{ year } 2 \frac{2}{3} \text{ months}$$

$$T \approx 1 \text{ year } 3 \text{ months}$$

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10 Sam has \$10 000 to invest. He has the choice of (a) 2.5% p.a., 3% p.a. or 3.25% p.a. simple interest.

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(a) Complete the table below to show the interest he would earn over a period of 5 years.

No. of years	1	2	3	4	5
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No. of years	1	2	3	4	5
Interest 2.5% p.a.	\$250	\$500	\$750	\$1000	\$1250
Interest 3% p.a.	\$300	\$600	\$900	\$1200	\$1500
Interest 3.25% p.a.	\$325	\$650	\$975	\$1300	\$1625

(b) Draw a graph to represent the interest earned on each investment.

(b)

