

## Percentages 1

- 1) At 05 06 Mr Ho bought 850 fish at a fish market for \$2.62 each.  
95 minutes later he sold them all to a supermarket for \$2.86 each.

(a) What was the time when he sold the fish?

*Answer(a)*

[1]

(b) Calculate his total profit.

*Answer(b) \$*

[1]

- 2) In 1977 the population of China was  $9.5 \times 10^8$ .  
In 2007 the population of China was  $1.322 \times 10^9$ .  
Calculate the population in 2007 as a percentage of the population in 1977.

*Answer*

, % [2]

- 3) Amalie makes a profit of 20% when she sells a shirt for \$21.60.

Calculate how much Amalie paid for the shirt.

*Answer \$*

[2]

## Percentages 1

4)

Marcus receives \$800 from his grandmother.

- (a) He decides to spend \$150 and to divide the remaining \$650 in the ratio

$$\text{savings} : \text{holiday} = 9 : 4.$$

Calculate the amount of his savings.

*Answer(a)* \$

[2]

- (b) (i) He uses 80% of the \$150 to buy some clothes.

Calculate the cost of the clothes.

*Answer(b)(i)* \$

[2]

- (ii) The money remaining from the \$150 is  $37\frac{1}{2}\%$  of the cost of a day trip to Cairo.

Calculate the cost of the trip.

*Answer(b)(ii)* \$

[2]

- (c) (i) Marcus invests \$400 of his savings for 2 years at 5% per year **compound** interest.

Calculate the amount he has at the end of the 2 years.

*Answer(c)(i)* \$

[2]

- (ii) Marcus's sister also invests \$400, at  $r\%$  per year **simple** interest.  
At the end of 2 years she has exactly the same amount as Marcus.

Calculate the value of  $r$ .

*Answer(c)(ii)*  $r =$

[3]

## Percentages 1

5)

Alberto and Maria share \$240 in the ratio 3 : 5.

- (a) Show that Alberto receives \$90 and Maria receives \$150.

*Answer(a)*

[1]

- (b) (i) Alberto invests his \$90 for 2 years at  $r\%$  per year **simple** interest.  
At the end of 2 years the amount of money he has is \$99.  
Calculate the value of  $r$ .

*Answer(b)(i)  $r =$*

[2]

- (ii) The \$99 is 60% of the cost of a holiday.  
Calculate the cost of the holiday.

*Answer(b)(ii) \$*

[2]

- (c) Maria invests her \$150 for 2 years at 4% per year **compound** interest.  
Calculate the exact amount Maria has at the end of 2 years.

*Answer(c) \$*

[2]

- (d) Maria continues to invest her money at 4% per year **compound** interest.  
After 20 years she has \$328.67.

- (i) Calculate exactly how much more this is than \$150 invested for 20 years at 4% per year **simple** interest.

*Answer(d)(i) \$*

[3]

- (ii) Calculate \$328.67 as a percentage of \$150.

*Answer(d)(ii)*

% [2]

## Percentages 1

6)

- (b) Daniella invests her \$30 at 3% per year, **compound** interest.  
Calculate the amount Daniella has after 2 years.  
Give your answer correct to 2 decimal places.

*Answer(b)* \$

[3]

- (c) Edward also invests \$30.  
He invests this money at a rate of  $r\%$  per year, **simple** interest.  
After 5 years he has a total amount of \$32.25.  
Calculate the value of  $r$ .

*Answer(c)*  $r =$

[2]

7)

- (b) Dania borrows \$325 for 2 years at a rate of 3.8% per year **simple** interest.  
Calculate the total amount Dania owes after 2 years.

*Answer(b)* \$

[3]

- (c) Lee borrows \$550 for 2 years at a rate of 6% per year **compound** interest.  
Calculate the total amount Lee owes after 2 years.

*Answer(c)* \$

[3]

## Percentages 1

8)

- (a) Ankuri lends her brother \$275 for 4 years at a rate of 3.6% per year **simple** interest. Calculate the total amount her brother owes after 4 years.

*Answer(a)* \$

[3]

- (b) Monesh invests \$650 in a bank which pays 4% per year **compound** interest. Calculate the amount Monesh will have after 2 years.

*Answer(b)* \$

[3]

9)

Johan invested \$600 for 3 years at 4% per year **compound** interest.

Calculate the final amount he had after three years.

*Answer* \$

[3]

## Percentages 1

- 10) Nikhil invests \$200 for 2 years at 4% per year **compound** interest.  
Calculate the **exact** amount Nikhil has after 2 years.

*Answer \$* [2]

- 11) Eva invests \$120 at a rate of 3% per year **compound interest**.

Calculate the total amount Eva has after 2 years.  
Give your answer correct to 2 decimal places.

*Answer \$* [3]

- 12) (b) Mia invests \$7500 at 3.5% per year **simple** interest.  
Calculate the total amount she has after 5 years.

*Answer(b) \$* [3]

- 13) Pedro invested \$800 at a rate of 5% per year **compound** interest.  
Calculate the **total** amount he has after 2 years.

*Answer \$* [2]