1 [2025-M/J-13-12]

In a sale, a shop reduces all prices by 20%.

(a) A coat costs $85 before the sale.

Work out the sale price of the coat.

$ ..... [2]

(b) The sale price of a shirt is $40.

Work out the cost of the shirt before the sale.

$ ..... [2]

2 [2025-M/J-15-13]

(a) Work out 70% of 120.

..... [2]

(b) Find 8 as a percentage of 25.

..... % [1]

(c) In a sale, the original price of a jacket is reduced by 12%.
The sale price of the jacket is $66.

Calculate the original price of the jacket.

$ ..... [2]

3 [2025-M/J-11-22]

(a) Zaya invests $4500 in a savings account.
The account pays **simple interest** at a rate of 3.2% per year.

Calculate the value of the investment at the end of 5 years.

$ ..... [3]

(b) Aisha invests $2750 in a different savings account.
This account pays **compound interest** at a rate of 2.1% per year.

Calculate the total amount of interest she receives at the end of 3 years.

$ ..... [3]

4 [2025-M/J-09-23]

(a) Ameerah invests $480 in a savings account.
The account pays **simple interest** at a rate of 3.6% per year.

Calculate the value of the investment at the end of 5 years.

$ ..... [3]

5 [2024-M/J-08-11]

Ahmed invests $4000 at a rate of 1.5% per year simple interest.

Calculate the value of the investment after 2 years.

$ ..... [2]

(b) Farhad invests \$1500 in an account paying compound interest at a rate of 4% per year.
Gulsan invests \$1500 in an account paying simple interest at a rate of x% per year.

Farhad and Gulsan have the same amount of money in their accounts at the end of 2 years.

Calculate the value of x.

$x =$ ..... [4]

7 [2024-M/J-1dii-21]

(ii) The total Joe earns is his salary plus a bonus of $\$x$.
The total he earns is 102.5% of his salary.

Calculate the value of x.

$x =$ ..... [2]

8 [2023-M/J-5-12]

Maya invests \$480 at a rate of 2% per year simple interest.

Calculate the total amount of interest she receives at the end of 5 years.

\$ ..... [2]

(a) A shop buys some fruit.
The table shows the bill for this fruit.

Item	Quantity (kg)	Price per kg ($)	Cost price ($)
Bananas	50	0.51	25.50
Oranges	72	1.35	p
Avocados	r	1.95	q
Pears	45	s	51.30
		Total cost price	240.30

(i) Find the value of each of p, q, r and s.

$p =$ .....

$q =$ .....

$r =$ .....

$s =$ ..... [4]

(ii) The shop sells all this fruit for a total of $325.

Calculate the percentage profit.

10 [2023-M/J-2c-21]

(c) In 2021, Miguel's income was \$32 000.
In 2022, his income increased to \$33 408.

Calculate the percentage increase in his income from 2021 to 2022.

..... % [2]

(d) Miguel invests \$$x$ in an account paying simple interest at a rate of 1.2% per year.
At the end of 3 years, he has \$890.96 in the account.

Calculate the value of x.

$x =$ ..... [2]

11 [2022-M/J-01-21]

(a) In 2020, the running cost for Frederick's car was \$5200.

28% of the running cost was spent on insurance.
$\frac{3}{25}$ of the running cost was spent on maintenance.
\$740 of the running cost was spent on tax.
The remainder of the running cost was spent on petrol.

(i) Calculate the amount Frederick spent on petrol.

\$ ..... [3]

(ii) In 2021, the tax increased by 1.5%.

Calculate the tax in 2021.

$ ..... [2]

12 [2022-M/J-01-22]

(a) In 2021, the cost of posting a letter was 84 cents.

(i) A company posts 1950 letters.

Find the cost, in dollars, to post these letters.

$ ..... [1]

(ii) In 2022, the cost of posting a letter is 96 cents.

Calculate the percentage increase in the cost of posting a letter.

..... % [2]

(b)

Cost of posting a letter is 96 cents
15% discount when monthly postage is more than $1000

Company *A* posts 1200 letters in one month.
Company *B* posts fewer letters than Company *A* in the same month.
Company *A* and Company *B* each pay the same amount to post their letters that month.

Find the number of letters Company *B* posts in that month.

..... [3]

(c) In 2022, the cost of posting a parcel with a mass of 1 kg or less is \$4.60 .
The cost increases by \$1.10 for each additional 0.5 kg.

Find the cost of posting a parcel with a mass of 3.5 kg.

\$ ..... [2]

(d) The cost of posting parcels increases by 7.2%.
After the increase, the cost of posting a parcel is \$13.40 .

Calculate the original cost of posting this parcel.

\$ ..... [2]

13 [2021-M/J-17-12]

In a sale, the price of a coat is reduced by 25%.
The sale price is $120.

Calculate the price of the coat before the sale.

$ ..... [2]

14 [2021-M/J-01-21]

In 2019 Nicole's annual income was $22 000.

(a) She spent $7200 on accommodation in 2019.

Calculate the percentage of her income she spent on accommodation.

..... % [2]

(b) Her annual income of $22 000 increased by 4% in 2020.

Calculate her annual income in 2020.

$ ..... [2]

(c) Nicole invests \$2000 in an account.
The account pays compound interest at a rate of K% per year.
At the end of the first year, the money in the account is \$2036.

(i) Show that $K = 1.8$.

[2]

(ii) Find the number of complete years before Nicole has at least \$2150 in the account.
Show your working.

..... years [3]

15 [2021-M/J-01-22]

(a) The price of an electric drill is \$78.
In a sale, the price is reduced by 15%.

Calculate the sale price.

\$ ..... [2]

(c)

ACE SIMPLE	COOL COMPOUND
Simple interest at 2.1% per year	Compound interest at 2% per year

Pietro invests $3500 in the Ace Simple account for 4 years.
Eliana invests $3500 in the Cool Compound account for 4 years.

At the end of the 4 years, who has more money in their account and by how much?

..... by $ ..... [4]

17 [2020-M/J-04-11]

(a) Write $\frac{11}{25}$ as a percentage.

.....% [1]

(b) Find 12% of 40.

..... [2]

18 [2020-M/J-13-11]

(a) During 2018, the population of a village increased from 200 to 250.

Calculate the percentage increase in population.

.....% [1]

19 [2020-M/J-04-12]

(a) Write 68% as a fraction in its lowest terms.

..... [1]

(b) The length of a rectangle is **increased** by 10%.
The width of the same rectangle is **decreased** by 10%.

Find the area of the new rectangle as a percentage of the area of the original rectangle.

..... % [2]

20 [2020-M/J-01-22]

(a) Stefan had an annual income of $21 500 in 2018.
His annual income increased to $22 790 in 2019.

Calculate the percentage increase.

..... % [2]

(b) Stefan invests $1260 in a bank.
The bank pays simple interest at a rate of 2.5% per year.

Calculate the amount Stefan has in the bank at the end of 3 years.

$ ..... [2]

Anton invests \$6000 in an account for 5 years.
The account has a compound interest rate of 2.5% per year.
At the end of 5 years, he spends \$4200 of this money on a family holiday to Malaysia.

(a) How much money is left in the account?

\$ ..... [3]

(c) Anton invests \$1500 in another account.
The account has a compound interest rate of p% per year.
At the end of 3 years, there is \$1598.85 in the account.

Calculate p.
Give your answer correct to 2 decimal places.

$p =$ ..... [3]