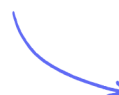


Percentages

Introduction to Percentages / Percentages of Amounts / Percentage Increases & Decreases / Percentage Change / Reverse Percentages

Easy (13 questions)	/23
Medium (15 questions)	/36
Hard (8 questions)	/28
Total Marks	/87

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Easy Questions

- 1 A weather forecaster predicts that there is a 65% chance that it will be sunny the next day.

Write down the probability that it will not be sunny the next day.

(1 mark)

- 2 There are some coloured marbles in a bag. The marbles are yellow, pink, white and green.

The table below shows the percentage of yellow, pink and white marbles in the bag.

Colour of Marble	Percentage
Yellow	27 %
Pink	35 %
White	13 %
Green	

Work out the percentage of green marbles in the bag.

(2 marks)

3 Judy buys a camera. The normal price of the camera is £250.

She gets a 10% discount.

(i) Work out 10% of £250.

(ii) Work out how much Judy pays for the camera.

(3 marks)

4



i) Write down the fraction of the rectangle that is shaded.

[1]

ii) Find the percentage of the rectangle that is **not** shaded.

[1]

(2 marks)

5 In 2019 the rent for a café was \$7275.

In 2020 the rent was \$7566.

Calculate the percentage increase in the rent between 2019 and 2020.

(2 marks)

- 6 (a)** There are 480 cabins on a ship.
On one cruise, 456 of these cabins were used.

Find the percentage of cabins that were used.

.....%

(1 mark)

- (b)** Last year the cost of a cruise was \$4600.
This year the cost of the same cruise is \$4784.

Work out the percentage increase in the cost.

(2 marks)

- 7** A plane ticket costs \$680 plus a tax of 16%.

Find the total cost of this ticket.

\$

(2 marks)

- 8** Work out 5% of \$25.

\$

(1 mark)

- 9** Work out 120 as a percentage of 300.

..... %

(1 mark)

10 A car park has 880 spaces.

25% of the 880 spaces are on the top floor.

Work out the number of spaces that are on the top floor.

(1 mark)

11 Work out 8% of 140.

(2 marks)

12 Work out 10% of 400.

(1 mark)

13 A charity sets a fundraising goal of £200.

They need to raise at least 75% of this amount to run an event.

So far, they have raised £160.

Show that the charity has raised enough money to run the event.

(2 marks)

Medium Questions

- 1 (a)** Indie wants to know what types of movies people like to watch. He asks the students in his school what their favourite type of movie is.

The results of his survey are shown in the table below.

Favourite Sport	Percentage
Comedy	24 %
Romance	6 %
Adventure	38 %
Sci Fi	10 %
Horror	18 %
Other	

Complete the table.

(1 mark)

- (b)** Write down the percentage of students who said romance.

(1 mark)

- (c)** Indie surveyed 150 students.

Work out the number of students who said horror.

(2 marks)

- 2 Felix buys a shirt for £20.
He sells it for £26.

Work out his percentage profit.

(3 marks)

- 3 The value of Martin's house has increased by 25% since he first bought it.
His house is now worth £250 000.

Work out the value of Martin's house before the increase.

(2 marks)

- 4 The entry price to a museum is \$18.
This price is increased by 28%.

Find the increased entry price.

\$

(2 marks)

- 5 Increase 42 by 16%.

(2 marks)

- 6 Roberto buys a toy for \$5.00 .
He then sells it for \$4.60 .

Calculate his percentage loss.

(2 marks)

- 7 In a football stadium there are 15 000 seats.
10 650 of these seats are occupied.

Find the percentage of the 15 000 seats that are occupied.

(1 mark)

- 8 Soraya is making flags to sell.

Each flag costs \$15 to make.
Soraya sells one flag for \$21.

Calculate the percentage profit.

(3 marks)

- 9 Last year the cost to keep a boat at a port was \$14 per night.
This year the cost has increased by 12%.

Calculate the cost this year.

\$.....

(2 marks)

- 10** The price of a television is \$560.
This price is reduced by 18% in a sale.

Work out the sale price.

\$

(2 marks)

- 11** The price of a watch increases from \$18 to \$19.17 .

Find the percentage increase in the price of this watch.

(3 marks)

- 12** In an orchestra there are 15 woodwind instruments, consisting of oboes, flutes and clarinets.

20% of these instruments are oboes.

There are twice as many flutes as clarinets.

Find the number of flutes.

(2 marks)

- 13** Yani's house is for sale.

She decides to reduce the selling price of \$240000 by 15%.

Calculate the new selling price.

\$

(2 marks)

14 Marya is buying a truck.

The truck costs £18 000

Marya pays 20% of the cost as a deposit.

She pays the rest of the cost in 20 equal monthly payments.

How much is each monthly payment?

(4 marks)

15 80% of a number is 64.

Find the number.

(2 marks)

Hard Questions

- 1 Zach sells toys at a market stall. He bought 20 jigsaw puzzles at £4 for each puzzle.

He set the initial selling price so that he would make 15% profit on each jigsaw puzzle sold.

Zach sold 7 jigsaw puzzles at that price.

Zach then reduced the selling price of each jigsaw puzzle by 10%.

He sold the remaining jigsaw puzzles at this price.

Has Zach made a profit or a loss?

You must explain your answer clearly.

(4 marks)

- 2 Suresh earns £62 000 a year.

He has to pay tax on his earnings.

Suresh is allowed to earn £12 500 without paying tax.

He has to pay 20% tax on the next £37 500 that he earns.

Anything that he earns over £50 000 will be taxed at 40%.

How much tax does Suresh have to pay in one year?

(4 marks)

3 (a) A theatre makes a decision to increase the price of all tickets sold by 6%.

Before this increase, the price of a ticket to see a music concert was £35.
Work out the price after the increase.

(3 marks)

(b) The price of a ticket to see a comedy show increased by £1.32. Work out the price before this increase.

(2 marks)

(c) After the increase, the price of a ticket to see a play was £40.28.
Work out the price before this increase.

(2 marks)

4 Nadira buys a pack of 40 dresses and pays \$500.
She sells 35 of these dresses for \$22 each.
She sells the remaining 5 dresses for \$14.50 each.

Calculate the percentage profit she makes when she sells all 40 dresses.

(4 marks)

5 Work out \$1.20 as a percentage of \$16.

(1 mark)

- 6 The number of passengers on a train increases from 63 to 77.

Calculate the percentage increase.

.....%

(3 marks)

- 7 A geography examination lasts for 1 hour 40 minutes.
Hari is allowed 25% extra time for his geography examination.

Work out the total time Hari has for this examination.
Give your answer in hours and minutes.

..... h min

(2 marks)

- 8 Two competing stores have discounts on their products.

Store A introduces an extra discount, which is applied to items after the first discount is applied.

Store A	Store B
20% off Today only: Additional 5% off!	25% off

Which store will be the cheapest for an item with the same original price in both stores?
Show your working clearly.

(3 marks)