Questions are ordered by increasing difficulty. If you are confused, please rewatch the lesson recording before contacting your tutor. Please submit the assignment prior to the deadline to allow time for marking and corrections. Please attempt all questions.

1. Emma buys a house for £201 500
She sells the house for £213 590

Calculate the percentage profit Emma makes.

$213590 - 201500 = 12090$

$12090 \div 201500 = 0.06$

$0.06 \times 100 = 6\%$

2.

Last year Geri's council tax bill was £1815

This year she has to pay £1906 for her council tax.

Work out the percentage increase in her council tax bill.

Give your answer to 1 decimal place.

$1906 - 1815 = 91$

$91 \div 1815 = 0.05$

$0.05 \times 100 = 5\%$

5. **3.**

In 2000, the world population was 6.1 billion.
In 2015, the world population was 7.3 billion.

Work out the percentage increase in population.
Give your answer correct to 1 decimal place.

$7.3 - 6.1 = 1.2$

$12 \div 6.1 = 0.196$

$0.196 \times 100 = 19.6\%$

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Banana computers sold 19.3 million computers in 2017.

In 2018, they sold 18.2 million computers.

Work out the percentage decrease in the number of computers sold.

Give your answer to three significant figures.

$19.3 - 18.2 = 1.1$

$1.1 \div 19.3 = 0.0569$

$0.0569 \times 100 = 5.69\%$

5. Last year Patrick paid £2534 for his annual train ticket.
This year he has to pay £2612 for his annual train ticket.

Work out the percentage increase in the cost of his train ticket.
Give your answer correct to 3 significant figures.

$2612 - 2534 = 78$

$78 \div 2534 = 0.0307$

$0.0307 \times 100 = 3.07\%$

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6. Karen buys a pack of 8 bottles of water.
The pack costs £1.25

Karen sells all 8 bottles of water for 50p each. $8 \times 50 = £4$

Work out Karen's percentage profit.

$4 - 1.25 = 2.75$

$2.75 \div 1.25 = 2.20$

$2.20 \times 100 = 22\%$

Donald buys a pack of 9 chocolate bars.
The pack costs £2.50

$9 \times 45 = £4.05$

Donald sells all 9 chocolate bars for 45p each.

Work out Donald's percentage profit.

$4.05 - 2.50 = 1.55$

$1.55 \div 2.50 = 0.62$

$0.62 \times 100 = 62\%$

8.

Richard buys a car for £13 500
He sells the car for £9 500

Work out Richard's percentage loss.
Give your answer correct to three significant figures.

$13500 - 9500 = 4500$

$4500 \div 13500 = 0.3333...$

$0.3333 \times 100 = 33.3\%$