Year 6
Maths
Friday 19th June

Starter

Match the answers to the correct question.

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120	10% of 37
80	40% of 200
3.7	60% of 350

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Main Teaching Summary

To find…

10%	Divide by 10
1%	Divide by 100
50%	Divide by 2
20%	Find 10% and then x2
30%	Find 10% and then x3
40%	Find 10% and then x4
25%	Divide by 4

Lesson Aims

- I can find a percentage increase or decrease.

Success Criteria:

- I find the percentage of the amount.
- I add or take this from the original amount.
- I write the new amount.

Main Teaching

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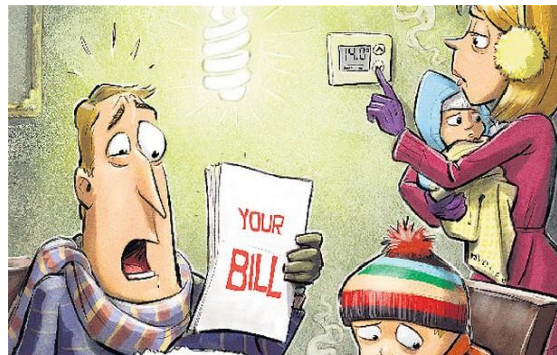
Percentage Increase

What is Percentage Increase?

Percentage Increase is when you make a number bigger by adding on a given percentage of it.

We often see Percentage Increase in real life in terms of savings accounts or bills.

Increasing a number by a percentage

Step 1: Find the percentage of the number

Step 2: Add the percentage to the original number

e.g. Increase 30 by 20%

Step 1: **10% of 30 is 3** So, **20% of 30 is 6**

Step 2: **30 + 6 = 36**

So 30 increased by 20% is 36

<u>Example 2</u>

A packet of crisps normally weighs 125g. The packet is increased in weight by 20%. What is the new weight of the packet of crisps?

Step 1

10% of 125 is 12.5 so, 20% is 25

Step 2

125 + 25 = 150

So the packet of crisps now weighs 150g!

Your turn…

I put £350 into a savings account.
After a year, the amount has increased
by 10% through interest.

How much do I have in there now?

Your turn…

I put £350 into a savings account.
After a year, the amount has increased
by 10% through interest.

How much do I have in there now?

Step 1: 10% is £35

Step 2: £350 + £35

$$= £385$$

Your turn… in your books

- Mild and Medium

1. Increase £300 by 10%
2. Increase £40 by 20%
3. Increase £80 by 5%
4. Increase £200 by 5%
5. Increase £50 by 30%
6. Increase £220 by 25%

- Spicy

1. Increase £96 by 15%
2. Increase £18 by 55%
3. Increase £256 by 5%
4. Increase £72 by 20%
5. Increase £321 by 2%
6. Increase £250 by 40%

Answers (needs edit)

Percentage Decrease

What is Percentage Decrease?

Percentage Decrease is when you make a number smaller by taking away a given percentage of it.

We often see Percentage Decrease in real life in terms of items in a sale or using a discount card.

Decreasing a number by a percentage

Step 1: Find the percentage of the number

Step 2: Take away the percentage from the original number

e.g. Decrease 50 by 30%

Step 1:**10% of 50 is 5**So**, 30% of 50 is 15**

Step 2: **50 - 15 = 35**

So 50 decreased by 30% is 35

Example 2

There is a pair of trainers in the sale.
There were originally £60.
They have 20% off.
How much do I pay for them?

Step 1

10% of £60 is £6   so, 20% is £12

Step 2

£60 - £12 = £48

So the trainers are now £48

Your turn…

There are some designer sunglasses in a sale with 10% off.
They were £190 before the sale.
How much are they now?

Your turn…

There are some designer sunglasses in a sale with 10% off.
They were £190 before the sale.
How much are they now?

Step 1: 10% is £19

Step 2: £190 - £19

= £171

Activity

Mild and Medium

1. **Decrease £80 by 10%**
2. **Decrease £40 by 30%**
3. **Decrease £48 by 20%**
4. **Decrease £58 by 5%**
5. **Decrease £250 by 10%**

Spicy

1. **Decrease £48 by 10%**
2. **Decrease £56 by 30%**
3. **Decrease £88 by 60%**
4. **Decrease £90 by 12%**
5. **Decrease £54 by 15%**

Activity Answers

Mild and Medium

1. Decrease £80 by 10%
2. Decrease £40 by 30%
3. Decrease £48 by 20%
4. Decrease £58 by 5%
5. Decrease £250 by 10%

Spicy

1. Decrease £48 by 10%
2. Decrease £56 by 30%
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Let's solve some problems on percentages.

Jaxon is reducing the prices of items in his shop by 20%.

Calculate the new prices.

£10.50   £15   £12

Main Teaching

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Yo-yo: 80% of £10.50 = £8.40
House: 80% of £15 = £12.00
Windmill: 80% of £12 = £9.60

Main Teaching

Let's solve some problems on percentages.

Iara scored 60 in her maths test.

She made herself a target of scoring 15% more in her next test.

What does her score need to be to hit her target?

Main Teaching

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Iara scored 60 in her maths test.

She made herself a target of scoring 15% more in her next test.

What does her score need to be to hit her target?

15% of 60 = 9

60 + 9 = 69

She needs to score at least 69

Main Teaching

Let's solve some problems on percentages.

Alex is selling her car.

The car has decreased in value by 35% since she bought it.

She paid £3,500.

She has worked out that the car is now worth £2,500.

Is Alex correct?

Explain your answer.

Main Teaching

Let's solve some problems on percentages.

Alex is selling her car.

The car has decreased in value by 35% since she bought it.

She paid £3,500.

She has worked out that the car is now worth £2,500.

Is Alex correct?

Explain your answer.

Alex is incorrect because 65% of £3,500 is £2,275.

Let's solve some problems on percentages.

Two children were asked to explain their method for calculating a 40% increase:

Mia: I find 10% and times it by 4. I then add this to my original number.

Harry: I divide my number by five and double it. Then I add it to the original number

Main Teaching

Let's solve some problems on percentages.

Two children were asked to explain their method for calculating a 40% increase:

I find 10% and times it by 4. I then add this to my original number.

Mia

I divide my number by five and double it. Then I add it to the original number

Harry

Both methods are correct, but Mia's method has fewer steps so may be quicker. Children may have different answers depending on their preferred method.

Activity

Now complete the word problem activities on the website.

If you want a real challenge try and do the challenge on the next slides.

Review

- Can you review your learning?

- Can you explain to others how to find a percentage of an amount?