Year 6

Thursday 11ᵗʰ June 2020

Maths

LO: Percentages of Amounts

A video of the lesson is avaible here (PDF only or above the powerpoint) Summer Term 2 - Week 1 - Lesson 4.

Brain Melter!

Can you get your car out of the very crowded car park by moving other cars forwards or backwards?
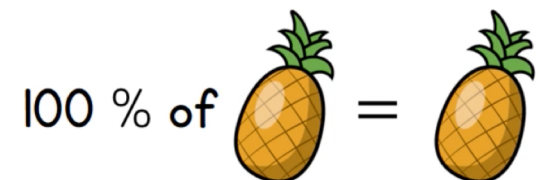
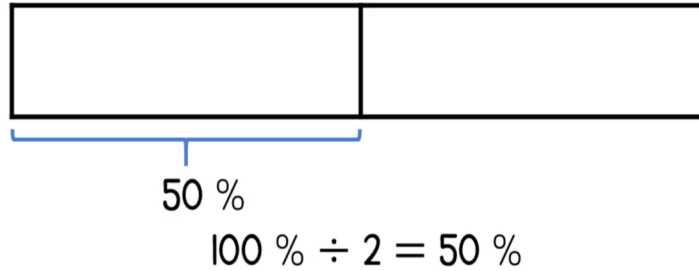Check if your solution work here.

Re-cap:

The teacher says....

Give **100** % today!

But I'm tired...

I was playing Fortnite late...

I don't get it...

Zzzzzzz

What does give 100% mean?

Everything

$$\frac{100}{100}$$

100 %

All

The whole
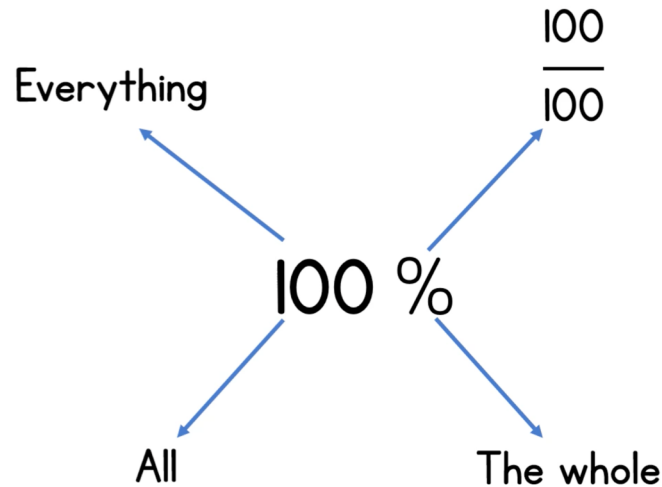
Remember! 100% of a pineapple is all of the pineapple!

100 % of 🍍 = 🍍

If I know...

50 %

$100\% \div 2 = 50\%$

Can I solve ...

1:

16

?
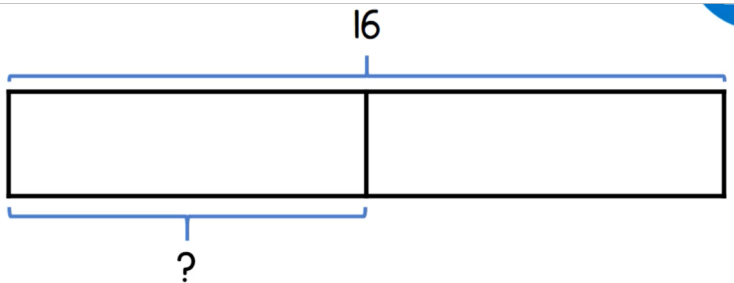
50 % of 16 =

2:

50 % of 60 = 30

50 % of ⬜ = 72

50 % of 70 = ⬜

50 % of 7 = ⬜

Answers

1:

16

?
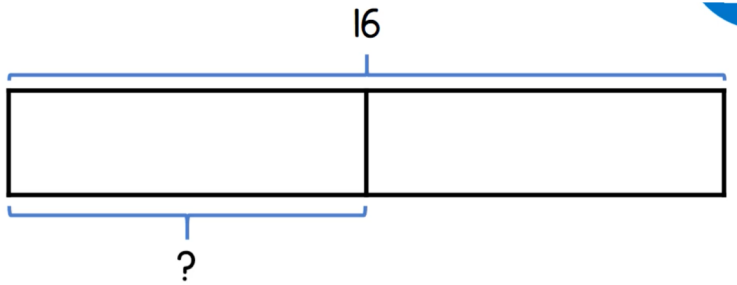
50 % of 16 =

$$16 \div 2 = 8$$

2:

50 % of 60 = 30

50 % of 144 = 72

50 % of 70 = 35

50 % of 7 = 3.5

100 %
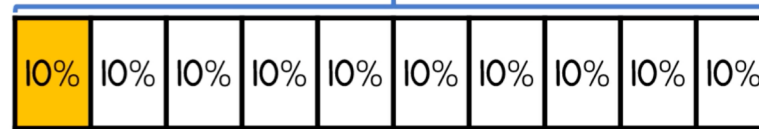
$$10\ \% \times 10 = 100\ \%$$

$$10\ \% = \frac{1}{10}$$

Can I solve ...

1:

120

10 % of 120 =

2:

20 % of 120 =

60 % of 120 =

90 % of 120 =

Answers

1:

10 % of 120 = 12
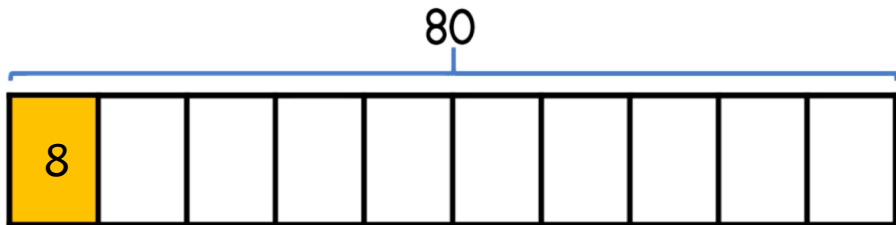
2:

20 % of 120 = 24

60 % of 120 = 72

90 % of 120 = 108

1. How could we calculate 15 % of 80?

10 %   5 %
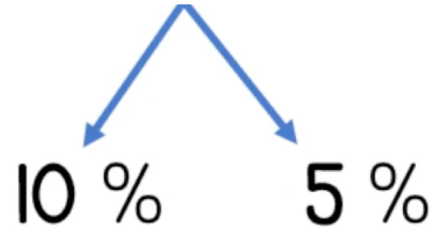
Lets partition 15% into 5% and 10%.

I know 10% of 80 is 8 because I have broke it into 10 equal pieces.

80

| 8 | | | | | | | | | |

I know 5% of 80 is 4 because it is half of 10% (8).

80

| 8 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
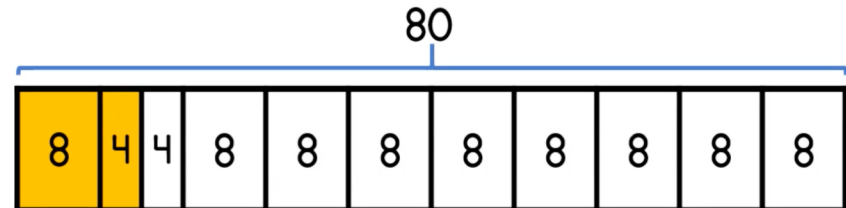
Therefore 15% is 12.
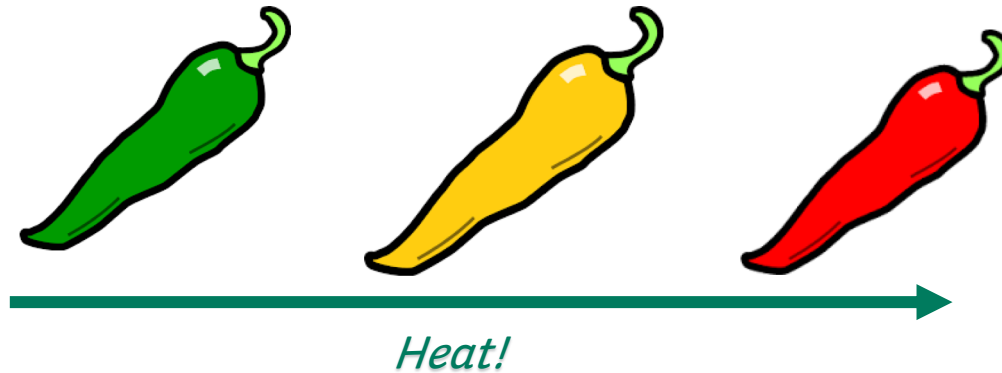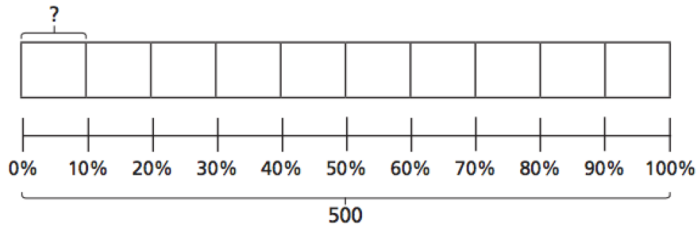
15 % of 80 = 8 + 4

The independent work continues on the next two slides. There are 5 questions and 1 extension.
(Espanol - cinco preguntas y una extensión)

Heat!

White Rose Maths

1 a) Use the bar model to find 10% of 500

?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

500

10% of 500 = ☐

b) Use your answer to part a) to help you complete the calculations.

20% of 500 = ☐   70% of 500 = ☐

90% of 500 = ☐   60% of 500 = ☐

30% of 500 = ☐   100% of 500 = ☐

2

To find 5% you can find 10% and then halve it.

Use Dora's method to complete the calculations.

a) 5% of 40 = ☐   **d)** 5% of 2,000 = ☐

b) 5% of 400 = ☐   **e)** 5% of 6,000 = ☐

c) 5% of 4,000 = ☐

What do you notice about your answers?

3 Some children are asked to find 75% of 340

I will find 25% and multiply it by 3

a) Use Dexter's method to find 75% of 340

☐

I will find 10% and multiply it by 7, then find 5% and add them together.

b) Use Alex's method to find 75% of 340

☐

I will find 25% and 50% and add them together.

c) Use Amir's method to find 75% of 340

d) Are there any other methods you could use?

4 Talk to a partner about different methods for finding these percentages.

20%   90%   60%   15%   55%   40%

Use your preferred method to calculate the percentages.

a) 20% of 1,000 =

20% of 550 =

20% of 40 =

b) 90% of 1,000 =

90% of 4,230 =

90% of 90 =

c) 60% of 1,000 =

60% of 400 =

60% of 98 =

d) 15% of 1,000 =

15% of 300 =

15% of 30 =

e) 55% of 1,000 =

55% of 4,400 =

55% of 8 =

f) 40% of 1,000 =

40% of 400 =

40% of 98 =

5 Ron is calculating these percentages.

10% of 20   20% of 10

20% is double 10%, and 10 is half of 20, so I know these will both have the same answer.

How does Ron know this?

Ext:

a) Complete the calculations.

20% of 40 =   25% of 60 =

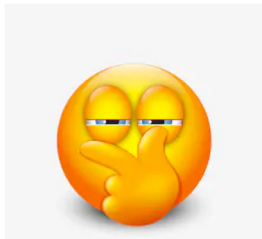40% of 20 =   60% of 25 =
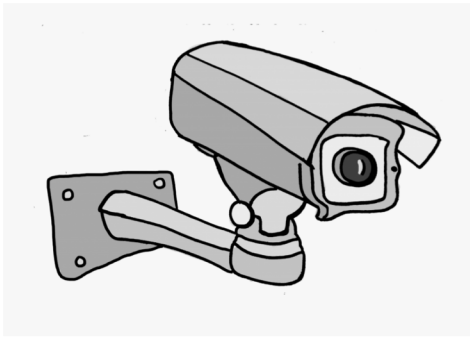
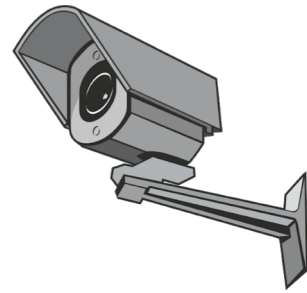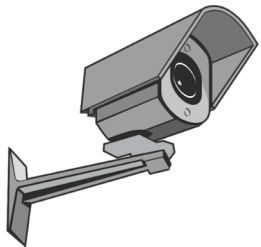b) What do you notice about the answers?

_____

_____

c) Does this always happen? Investigate with other examples.
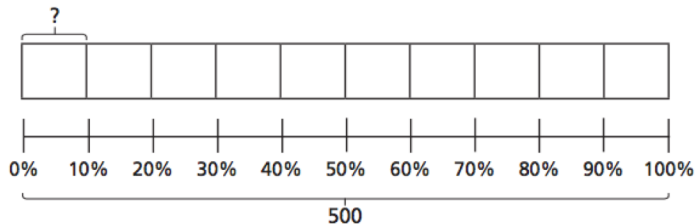
d) Talk about your findings with a partner.

The next two slides contain the answers should you wish to check you work and reflect on what you understand.

Percentage of an amount (2)

White Rose Maths

1 a) Use the bar model to find 10% of 500

?

| 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |

500

10% of 500 = **50**

b) Use your answer to part a) to help you complete the calculations.

20% of 500 = **100**   70% of 500 = **350**

90% of 500 = **450**   60% of 500 = **300**

30% of 500 = **150**   100% of 500 = **500**

2

To find 5% you can find 10% and then halve it.

Use Dora's method to complete the calculations.

a) 5% of 40 = **2**   **d)** 5% of 2,000 = **100**

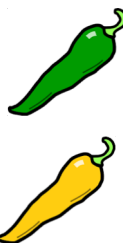**b)** 5% of 400 = **20**   **e)** 5% of 6,000 = **300**

c) 5% of 4,000 = **200**

What do you notice about your answers?

3 Some children are asked to find 75% of 340

I will find 25% and multiply it by 3

a) Use Dexter's method to find 75% of 340

255

I will find 10% and multiply it by 7, then find 5% and add them together.

b) Use Alex's method to find 75% of 340
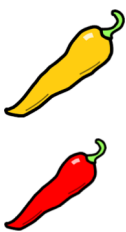
255

I will find 25% and 50% and add them together.

c) Use Amir's method to find 75% of 340

255

d) Are there any other methods you could use?

4 Talk to a partner about different methods for finding these percentages.

20%   90%   60%   15%   55%   40%

Use your preferred method to calculate the percentages.

a) 20% of 1,000 = 200   d) 15% of 1,000 = 150

20% of 550 = 110   15% of 300 = 45

20% of 40 = 8   15% of 30 = 4.5

b) 90% of 1,000 = 900   e) 55% of 1,000 = 550

90% of 4,230 = 3,807   55% of 4,400 = 2,420

90% of 90 = 81   55% of 8 = 4.4

c) 60% of 1,000 = 600   f) 40% of 1,000 = 400

60% of 400 = 240   40% of 400 = 160

60% of 98 = 58.8   40% of 98 = 39.2

5 Ron is calculating these percentages.

10% of 20   20% of 10

20% is double 10%, and 10 is half of 20, so I know these will both have the same answer.

How does Ron know this?

Ext:

a) Complete the calculations.

20% of 40 = 8   25% of 60 = 15

40% of 20 = 8   60% of 25 = 15

b) What do you notice about the answers?

Each column is the same.

c) Does this always happen? Investigate with other examples.

d) Talk about your findings with a partner.