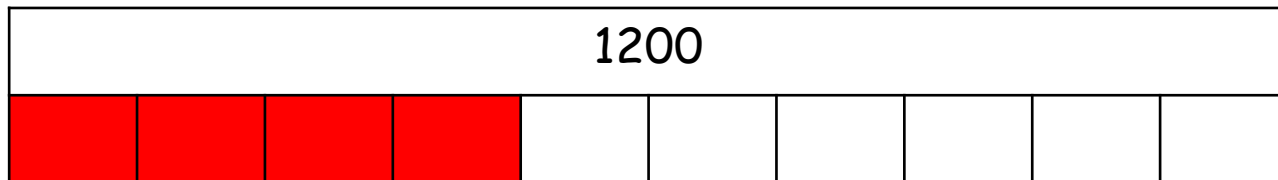
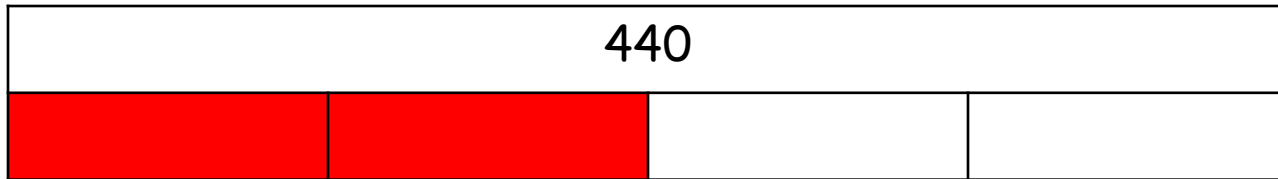
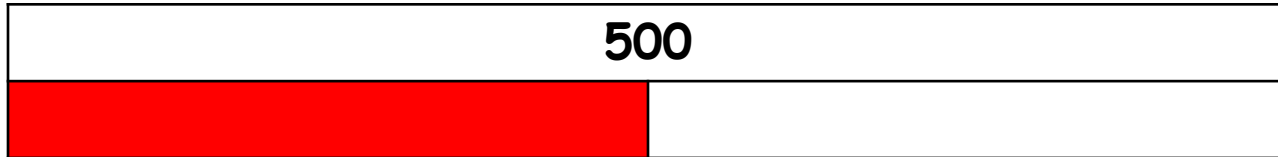


RECALL

Can you write a calculation for each of these bar models?

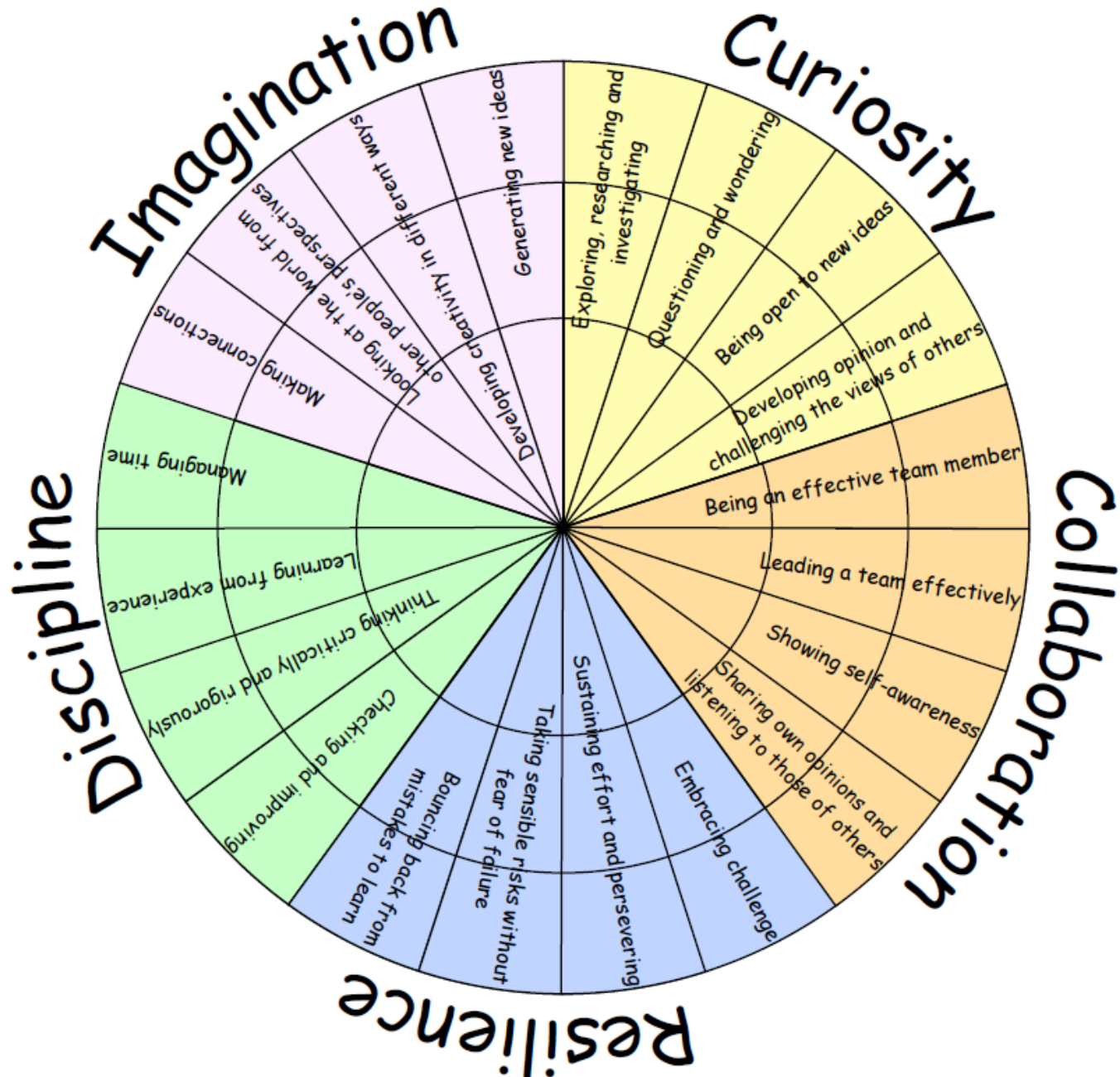


Can you make the calculation into a word problem. Think carefully about the context.

I CAN RECOGNISE AND
UNDERSTAND % AS PART OF
100 AND WRITE A % AS A
FRACTION AND A DECIMAL

Percentage (15i)

LEARNING HABITS?

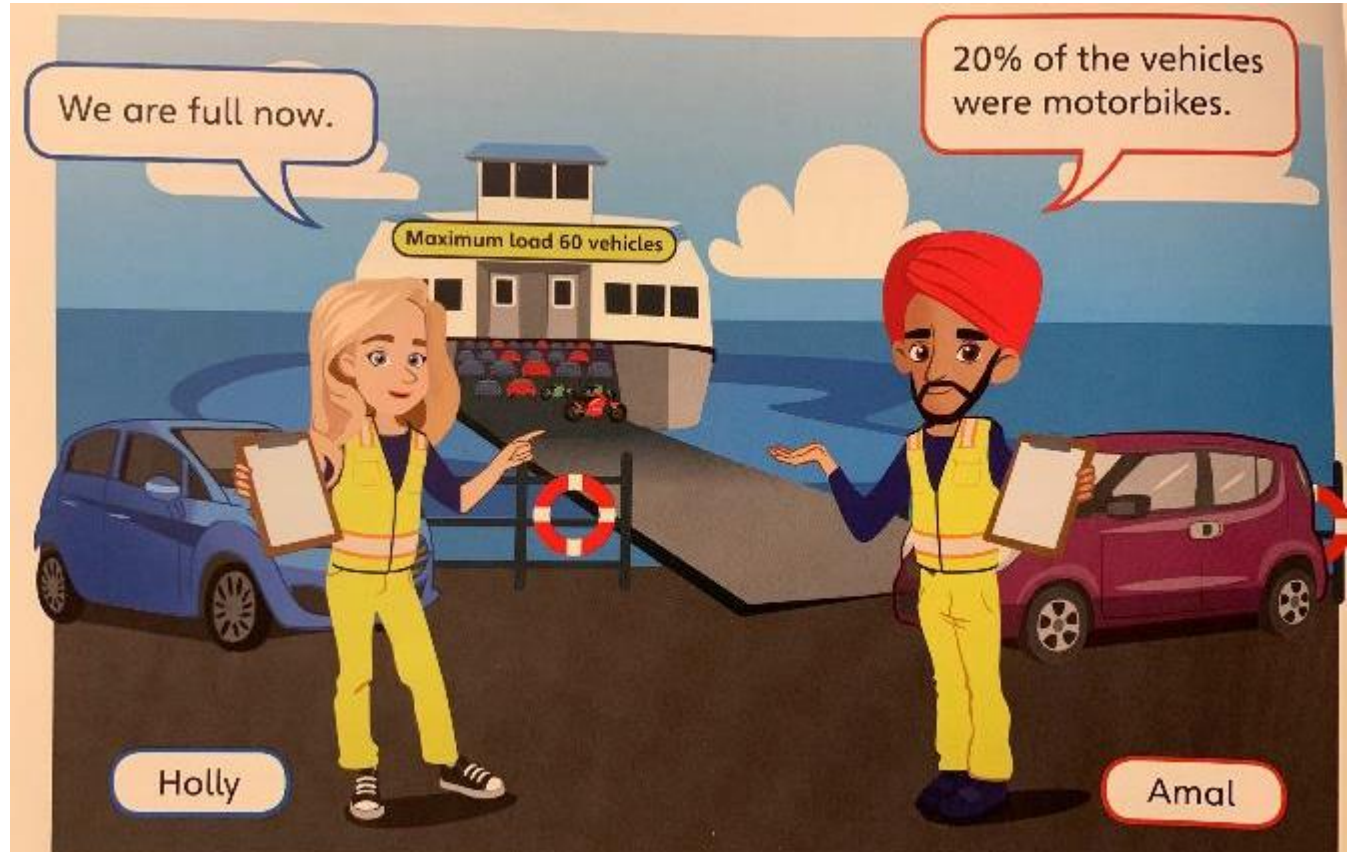


GUIDED PRACTICE

1) How many motorbikes are on the ferry?

2) 35% of the vehicles on the ferry are vans.

How many more vans than motorbikes are there?



How many different ways can you show these calculations

INTELLIGENT PRACTICE



$10\% \text{ of } 150 =$

$20\% \text{ of } 150 =$

$30\% \text{ of } 150 =$

$70\% \text{ of } 150 =$

Explain how you solved these calculations.



$25\% \text{ of } 280 =$

$75\% \text{ of } 280 =$

$25\% \text{ of } 1600 =$

$75\% \text{ of } 1600 =$

Explain how you solved these calculations.



$10\% \text{ of } 2400 =$

$5\% \text{ of } 2400 =$

$1\% \text{ of } 2400 =$

$3\% \text{ of } 2400 =$

Explain how you solved these calculations.

$20\% \text{ of } 40 =$

$25\% \text{ of } 60 =$

$40\% \text{ of } 20 =$

$60\% \text{ of } 25 =$

What do you notice?

Does this always happen?



INTELLIGENT PRACTICE ANSWERS



$10\% \text{ of } 150 = 15$

$20\% \text{ of } 150 = 30$

$30\% \text{ of } 150 = 45$

$70\% \text{ of } 150 = 105$

Explain how you solved these calculations.



$25\% \text{ of } 280 = 70$

$75\% \text{ of } 280 = 210$

$25\% \text{ of } 1600 = 400$

$75\% \text{ of } 1600 = 1200$

Explain how you solved these calculations.



$10\% \text{ of } 2400 = 240$

$5\% \text{ of } 2400 = 120$

$1\% \text{ of } 2400 = 24$

$3\% \text{ of } 2400 = 72$

Explain how you solved these calculations.



$20\% \text{ of } 40 = 8$

$40\% \text{ of } 20 = 8$

What do you notice?

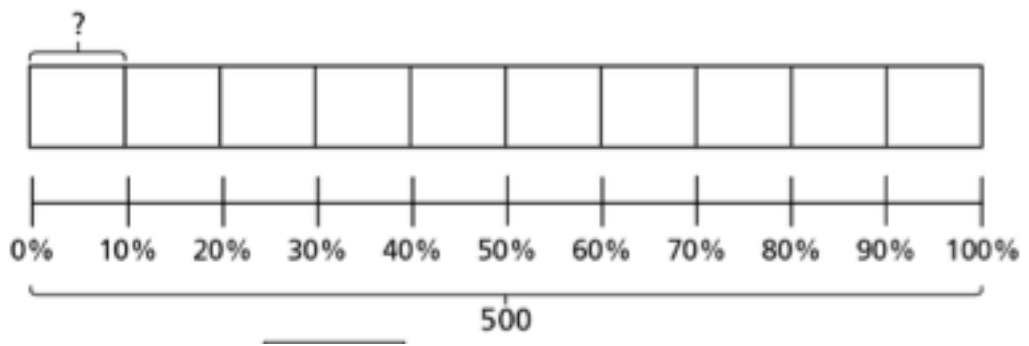
Does this always happen?

$25\% \text{ of } 60 = 15$

$60\% \text{ of } 25 = 15$

DIVE DEEPER 1

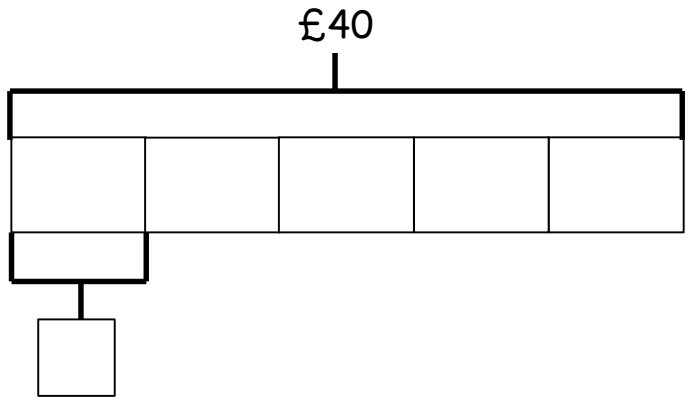
1a) Use the bar model to find 10% of 500



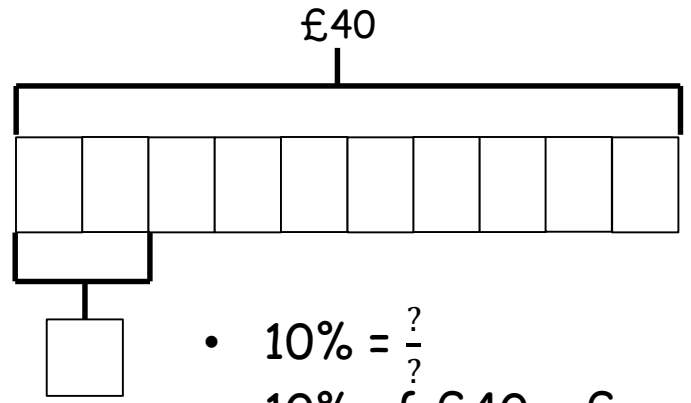
b) Use the answer from part a) to help you complete the calculations.

20% of 500 = 70% of 500 = 90% of 500 =

2) Complete the two methods for finding 20% of £40



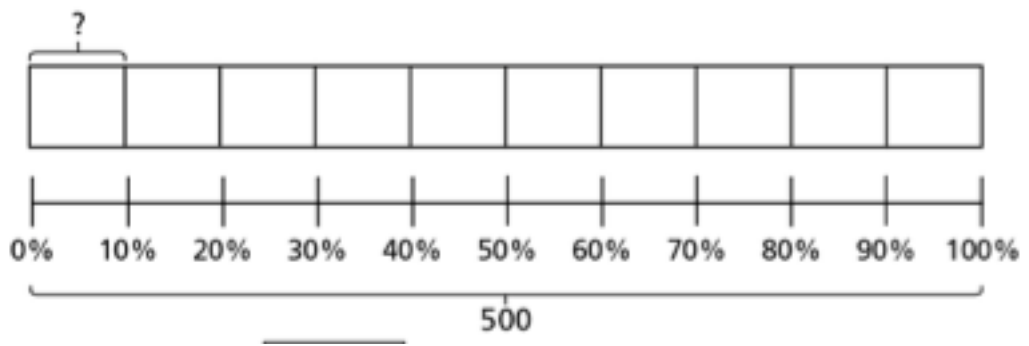
- $20\% = \frac{?}{?}$
- $40 \div ? = \underline{\hspace{2cm}}$
- 20% of £40 is £



- $10\% = \frac{?}{?}$
- 10% of £40 = £
- 20% of £40 = £ + £
- $\hspace{10em} = \text{£} \underline{\hspace{2cm}}$

DIVE DEEPER 1 ANSWERS

1a) Use the bar model to find
 10% of 500 = **50**



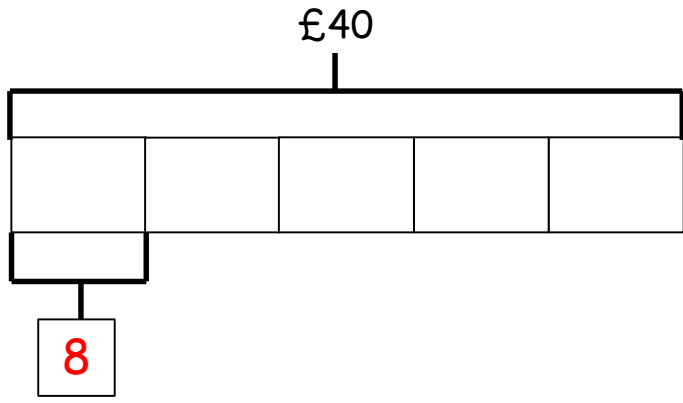
b) Use the answer from part a)
 to help you complete the
 calculations.

20% of 500 = **100**

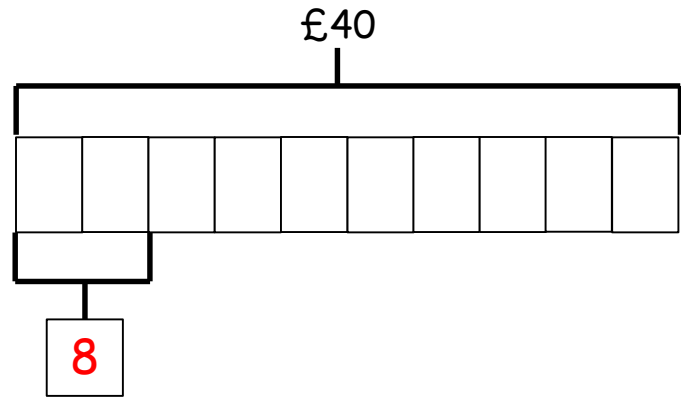
70% of 500 = **350**

90% of 500 = **450**

2) Complete the two methods for finding 20% of £40



$40 \div 5 = 8$
 20% of £40 is **£8**



10% of £40 = **£4**
 20% of £40 = **£4 + £4**
 = **£8**

DIVE DEEPER 2

3) Complete the table.

Starting number	10% of the number	20% of the number	60% of the number
400			
410			
41			
401			
	1.4		
		4.1	

4) Ron is calculating these percentages.

10% of 20

20% of 10

He says that, 'To find 10% of a number, I divide by 10. So, to find 20% of a number, I divide by 20.'

Is he correct? Explain your answer

DIVE DEEPER 2 ANSWERS

3) Complete the table.

Starting number	10% of the number	20% of the number	60% of the number
400	40	80	240
410	41	82	246
41	4.1	8.2	24.6
401	40.1	80.2	240.6
14	1.4	2.8	8.4
20.5	2.05	4.1	12.3

4) Ron is calculating these percentages.

10% of 20

20% of 10

He says that, 'To find 10% of a number, I divide by 10. So, to find 20% of a number, I divide by 20.'

Is he correct? **No because $100\% \div 10 = 10\%$ but $100\% \div 20 = 5\%$. If you want to find 20% you need to divide by 5. $100\% \div 5 = 20\%$**

DIVE DEEPER 3

5) Use Dora's method to complete the calculations.

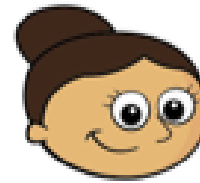
a) 5% of 40 =

d) 5% of 2000 =

b) 5% of 400 =

e) 5% of 6000 =

c) 5% of 4000 =



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

What do you notice about your answers?

6) Explain which method you would use to find these different percentages.

20%

99%

60%

15%

55%

40%

1%

33%

Using your preferred method, find each of the percentages above of 4,400.

7) Would you rather? Explain your reasons clearly

a) Have 10% of £5 or 75% of 80p

b) Be given 60% of 2 pizzas or 26% of 5 pizzas?

c) Be bitten by 15% of 120 mosquitoes or 8% of 250 mosquitoes?

d) Sit in a traffic jam for 33% of 2 hours or 44% of 1hr 40mins?

DIVE DEEPER 3 ANSWERS

5) Use Dora's method to complete the calculations.

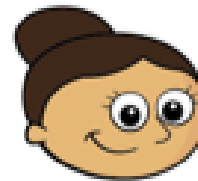
a) 5% of 40 = 2

d) 5% of 2000 = 100

b) 5% of 400 = 20

e) 5% of 6000 = 300

c) 5% of 4000 = 200



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

What do you notice about your answers?

6) Explain which method you would use to find these different percentages.

20% = 880

99% = 4356

60% = 2640

15% = 660

55% = 2420

40% = 1760

1% = 44

33% = 1452

Using your preferred method, find each of the percentages above of 4,400.

7) Would you rather? Explain your reasons clearly

a) Have 10% of £5 or 75% of 80p

b) Be given 60% of 2 pizzas or 26% of 5 pizzas?

c) Be bitten by 15% of 120 mosquitoes or 8% of 250 mosquitoes?

d) Sit in a traffic jam for 33% of 2 hours or 44% of 1hr 40mins?

SELF-ASSESSMENT

- Some will even be able to think about most efficient methods to find percentages of amounts
 - Some will be able to find any percentage of an amount
 - Most will be able to find any multiple of 10 and 5% of an amount
 - All will be able to explain how to use 10% to find a multiple of 10%
- 