Hello!

We hope you and your families are safe and well.

You are required to complete today's work. Please try your very best!

Independent work

Complete your fluency, reasoning and problem solving questions. Choose the colour questions you are given in class e.g. red, blue or yellow.

1 x 12 = 12

2 x 12 = 24

3 x 12 = 36

4 x 12 = 48

5 x 12 = 60

6 x 12 = 72

7 x 12 = 84

8 x 12 = 96

9 x 12 = 108

10 x 12 = 120

11 x 12 = 132

12 x 12 = 144

$12 \div 12 = 1$

$24 \div 12 = 2$

$36 \div 12 = 3$

$48 \div 12 = 4$

$60 \div 12 = 5$

$72 \div 12 = 6$

$84 \div 12 = 7$

$96 \div 12 = 8$

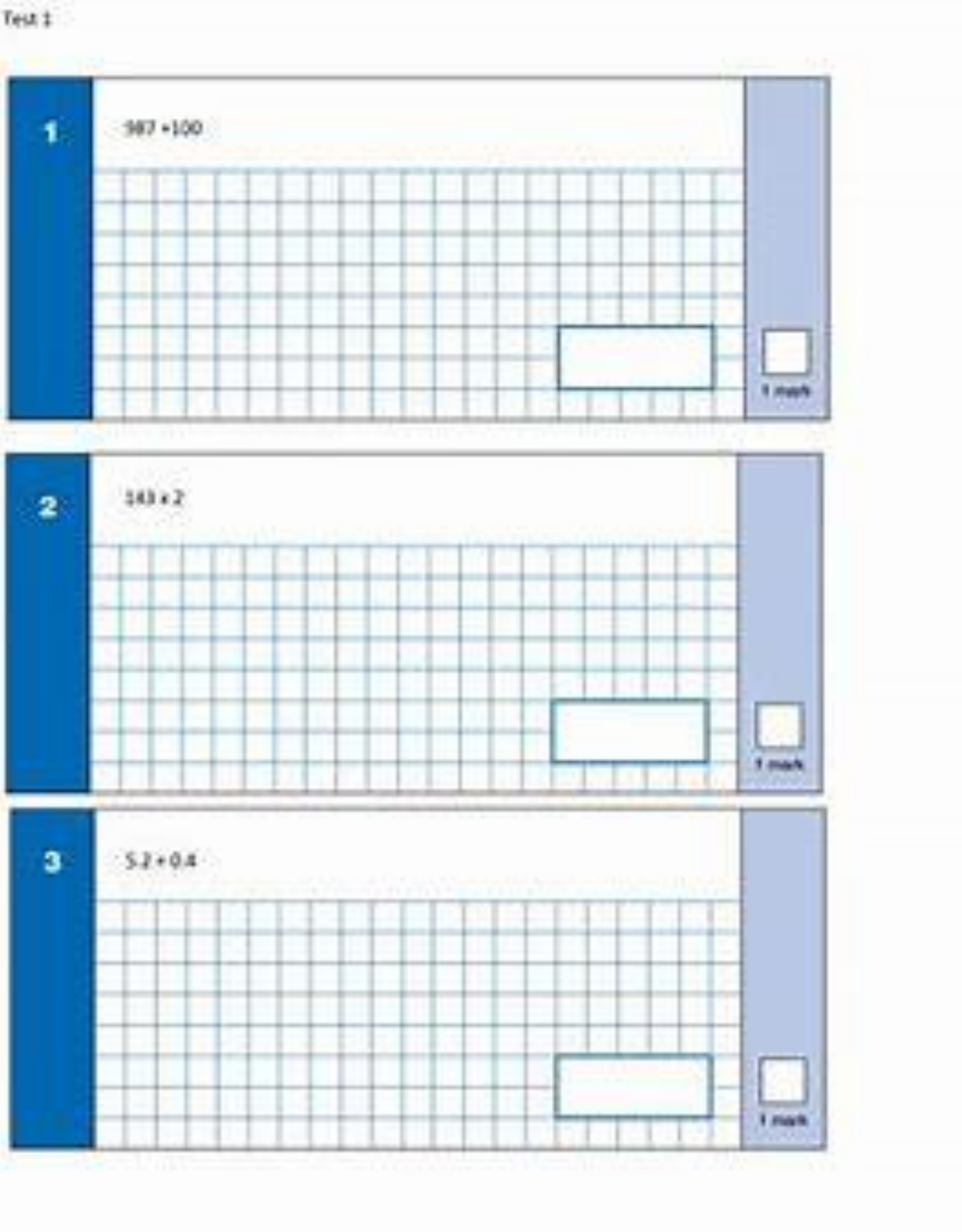
$108 \div 12 = 9$

$120 \div 12 = 10$

$132 \div 12 = 11$

$144 \div 12 = 12$

Arithmetic Test



21.01.2021

L.O: To consolidate finding percentages of amounts.

Success Criteria;

- Understand 'per cent' means 'out of 100'
- Use your knowledge of equivalent fractions
- Use your knowledge of multiplication and division

Introduction

Match the questions to the correct answers.

50% of 140	70
1% of 600	43
10% of 430	6
25% of 60	5.5
10% of 55	15
25% of 80	20

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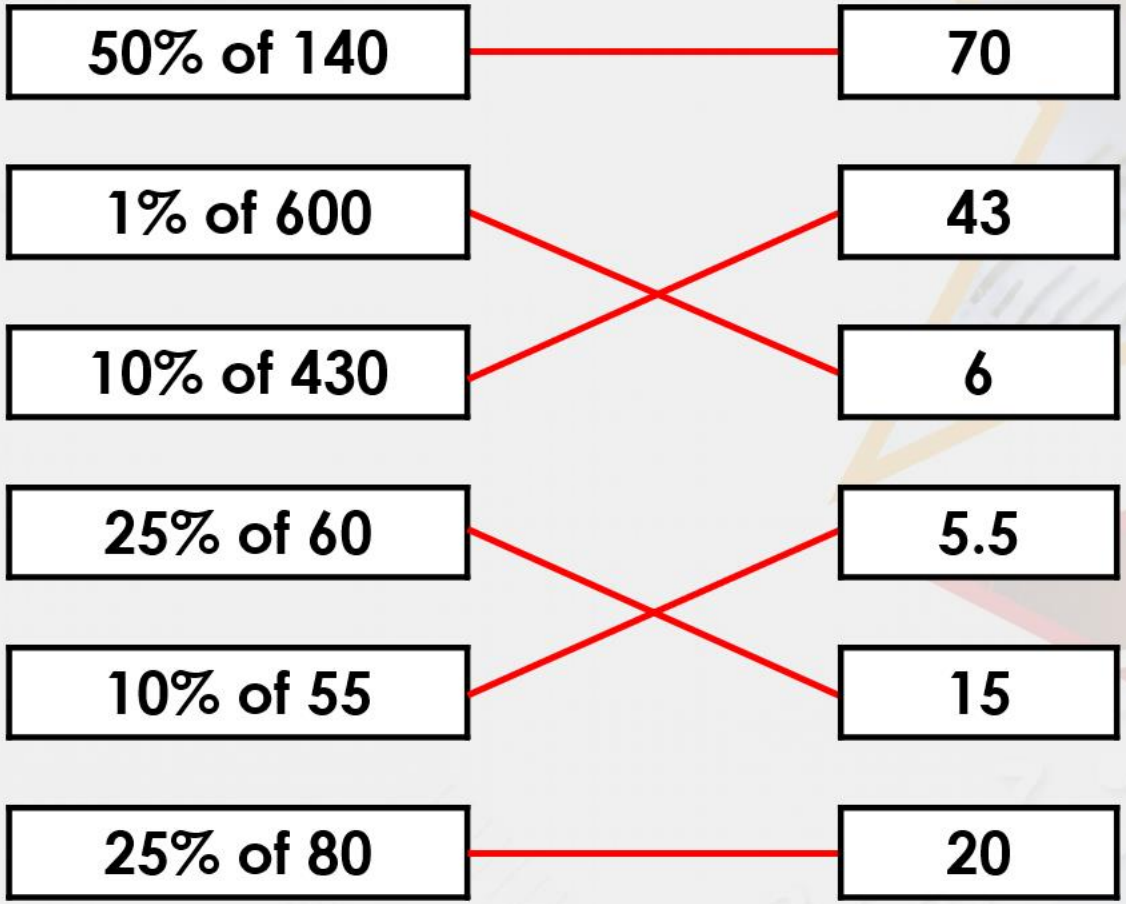
Introduction

Match the questions to the correct answers.



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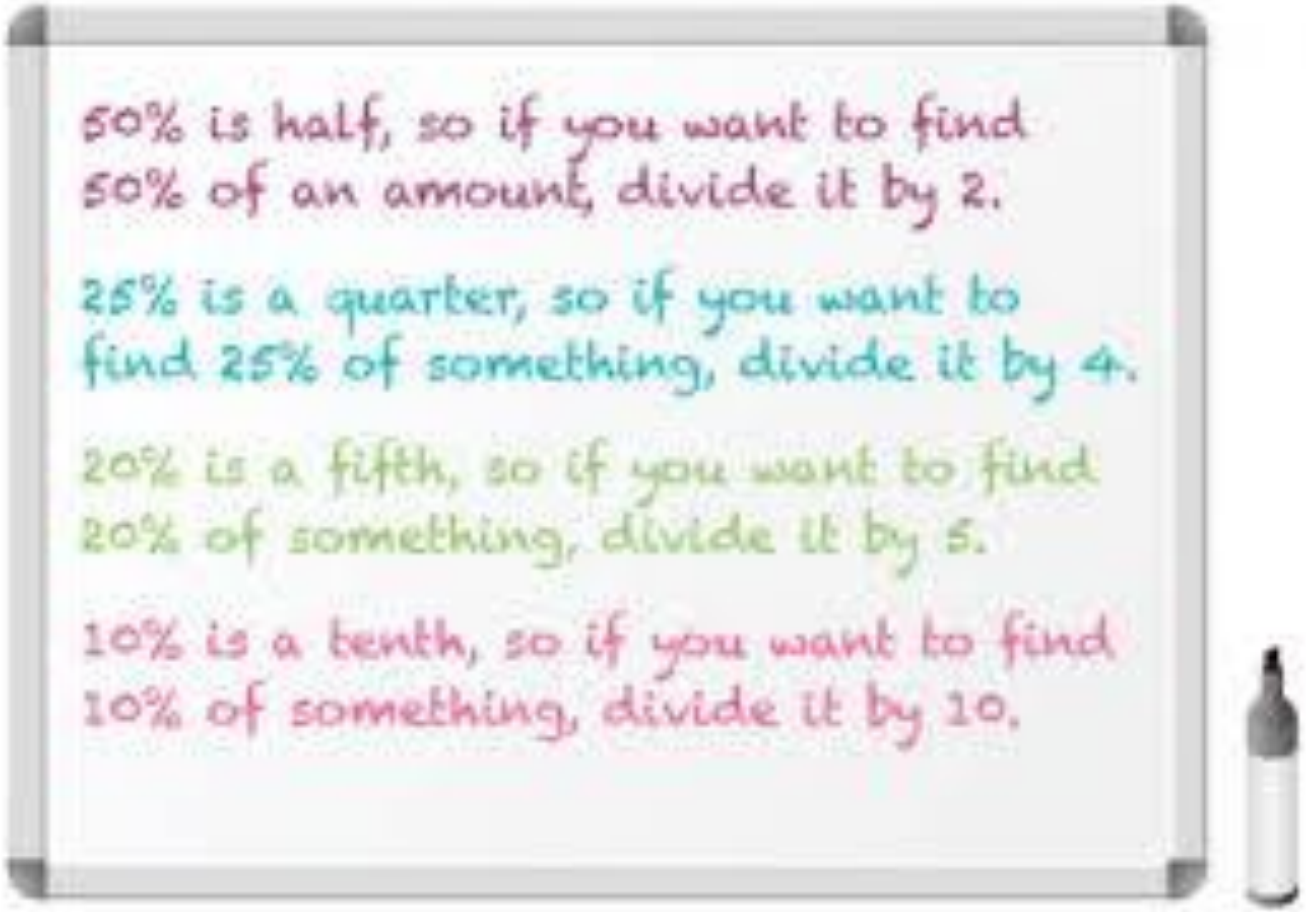


Percentages of amounts

Percentages of amounts

Partitioning the percentage can sometimes be the most efficient way to find the answer. Then you just add up the separate answers

For example:

What is 41% of 500?

Step 1: Partition 41% into 40% and 1%.

Step 2: Find 40% of 500.

To find 40%, find 10% first by dividing by 10, and then multiply it by 4.

500 ÷ 10 = 50

50 x 4 = 200

Step 3: Find 1% of 500.

To find 1%, you need to divide by 100.

500 ÷ 100 = 5

Step 4: Add the two answers together.

200 + 5 = 205

So 41% of 500 = *205*

Percentages of amounts

5% of £5

When finding 5%, you would need to **first** find **10%** of £5.

The best way to do this would be to divide 500p by 10, which equals 50p.

Since you are finding **5% which is half of 10%**, you would need to **halve** the 50p which would give you **25p**.

15% of 8m

You would need to find **10%** of 8m (800cm ÷ 10 = 80cm) and **5%** of 8m (80cm ÷ 2 = 40cm), then add them together (80cm + 40cm) to make **120cm**.

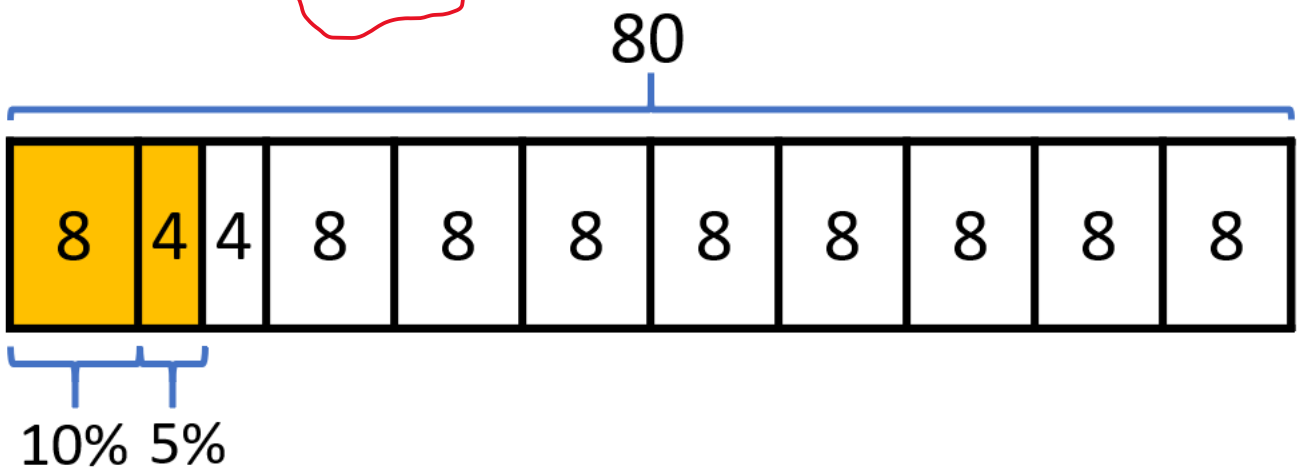
Calculate 15% of 80?

Calculate 15% of 80?

10% 5%

15% of 80 = 8 + 4

15% of 80 = 12



Which card shows the highest amount? Which shows the lowest?

A. 20% of 110

B. 35% of 80

C. 15% of 160

A. 20% of 110 = 22

Lowest

B. 35% of 80 = 28

Highest

C. 15% of 160 = 24

Problem Solving 1

Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	76% of 350 = 266	65% of 200 = 130	10% of 1m = 50cm
94% of 100 = 94	10% of 110 = 10	55% of 160 = 88	31% of 80 = 32
20% of 80 = 15	30% of 3m = 80cm	34% of 100 = 34	

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Problem Solving 1

Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	76% of 350 = 266	65% of 200 = 130	10% of 1m = 50cm
94% of 100 = 94	10% of 110 = 10	55% of 160 = 88	31% of 80 = 32
20% of 80 = 15	30% of 3m = 80cm	34% of 100 = 34	

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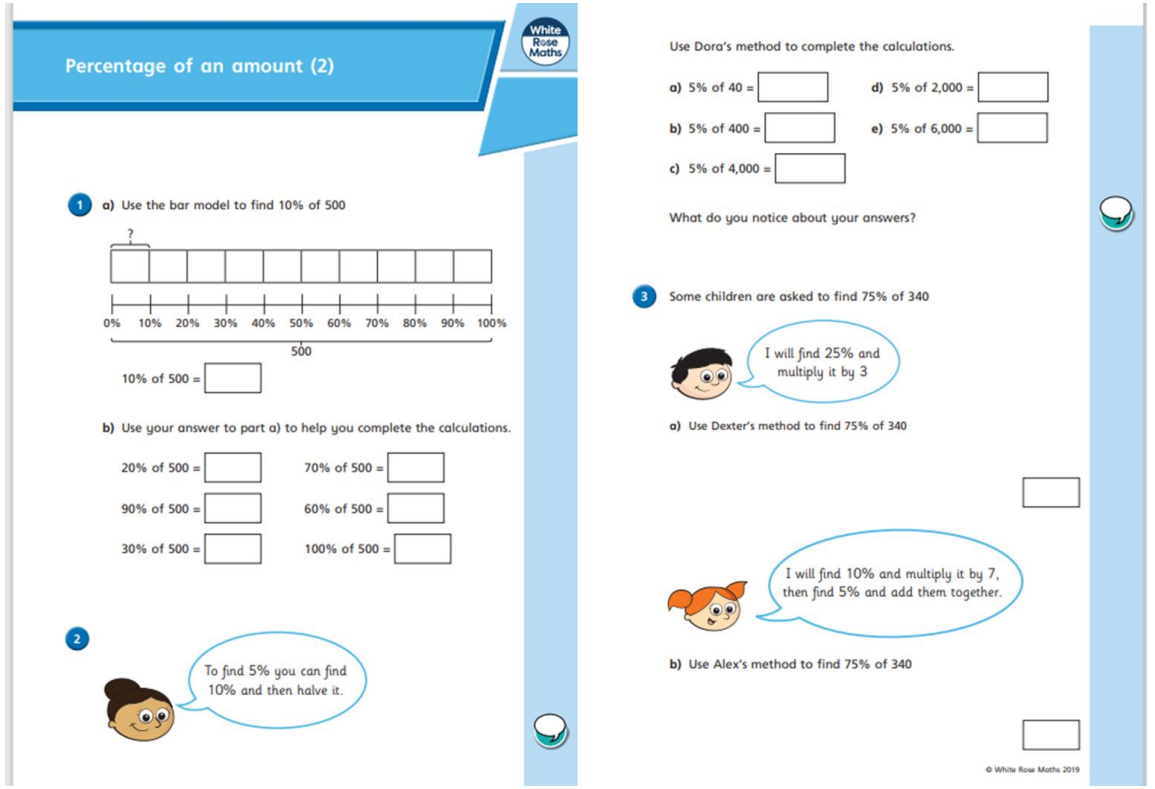
Main Activity



Percentage of an amount (2)

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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

☐

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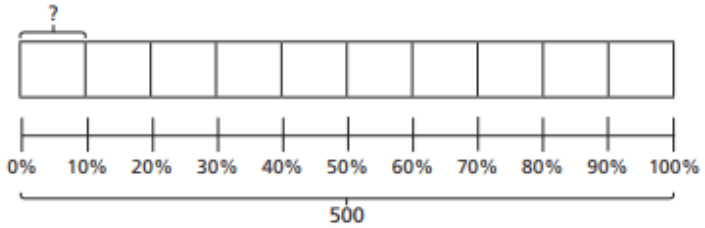
Complete the worksheet- Percentages of amounts.
Complete the RPS worksheet (slide 21, 22 or 23) you are normally given in class- red, blue or yellow.

Percentage of an amount (2)

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

☐

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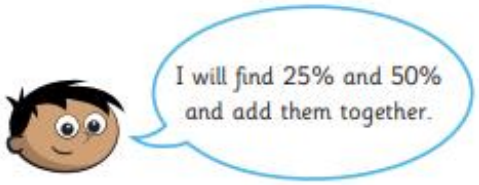


c) Use Amir's method to find 75% of 340

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 = ☐

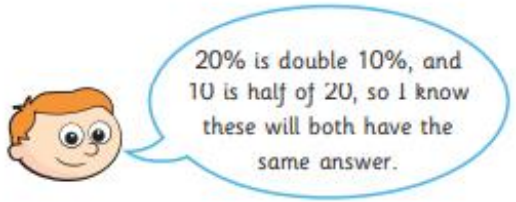
d) 15% of 1,000 = ☐
15% of 300 = ☐
15% of 30 = ☐

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



How does Ron know this?

6 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.

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Percentage of an Amount 2

1a. Melody says,

To find 20% of an amount, you divide the number by 20.

Is Melody correct? Prove it.

D R

Percentage of an Amount 2

1b. Arthur says,

To find 70% of an amount, you divide the number by 70.

Is Arthur correct? Prove it.

D R

2a. Which is the odd one out?

A	B	C
40% of 60	50% of 48	30% of 50

Explain your reasoning.
Could there be more than one answer?

D R

2b. Which is the odd one out?

A	B	C
40% of 50	50% of 40	70% of 90

Explain your reasoning.
Could there be more than one answer?

D R

3a. Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	40% of 100 = 40	30% of 60 = 18	50% of 50 = 25
40% of 80 = 50	60% of 40 = 30	10% of 100 = 1	60% of 40 = 24
90% of 80 = 75	10% of 70 = 7	90% of 20 = 18	

D PS

3b. Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	50% of 20 = 10	80% of 50 = 40	10% of 100 = 50
50% of 40 = 30	70% of 100 = 7	30% of 10 = 3	80% of 80 = 60
40% of 90 = 36	60% of 60 = 36	70% of 40 = 28	

D PS

Percentage of an Amount 2

4a. Libby says,

To find 15% of an amount, you divide the number by 10 and then add 5.

Is Libby correct? Prove it.

R

Percentage of an Amount 2

4b. Raffy says,

To find 5% of an amount, you divide the number by 10 and then divide it by 5.

Is Raffy correct? Prove it.

R

5a. Which is the odd one out?

A	B	C
5% of £60	26% of £650	45% of £80

Explain your reasoning.
Could there be more than one answer?

R

5b. Which is the odd one out?

A	B	C
40% of £80	28% of £150	6% of £40

Explain your reasoning.
Could there be more than one answer?

R

6a. Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	20% of 2m = 40cm	20% of 240 = 48	30% of 180 = 45
19% of 1m = 28cm	86% of 120 = 100	62% of 50 = 31	25% of 140 = 50
30% of 80 = 32	10% of 130 = 13	95% of 140 = 133	

PS

6b. Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	30% of 90 = 30	11% of 110 = 11	25% of 180 = 40
20% of 80 = 16	29% of 3m = 87cm	55% of 100 = 55	35% of 200 = 17
91% of 100 = 91	11% of 300 = 3	30% of 180 = 54	

PS

Percentage of an Amount 2

7a. Selina says,

22% of 2.5m is 5.5cm

Explain Selina's mistake and help her find the correct answer.

R

8a. Which is the odd one out?

A	B	C
37.5% of £296	22% of £450	32% of £175

Explain your reasoning.
Could there be more than one answer?

R

9a. Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	33% of 9L = 450ml	23% of 50 = 11.5	19% of 600 = 112
37.5% of 300 = 112.5	26% of £72 = £18.72	13% of m = 13cm	44% of 2m = 80cm
98% of £76 = £74.48	37.5% of 200 = 75	22% of £10 = £2.20	

PS

Percentage of an Amount 2

7b. Max says,

23% of 1.5m is 345cm

Explain Max's mistake and help him find the correct answer.

R

8b. Which is the odd one out?

A	B	C
18% of £38	12.5% of £80	17% of £52

Explain your reasoning.
Could there be more than one answer?

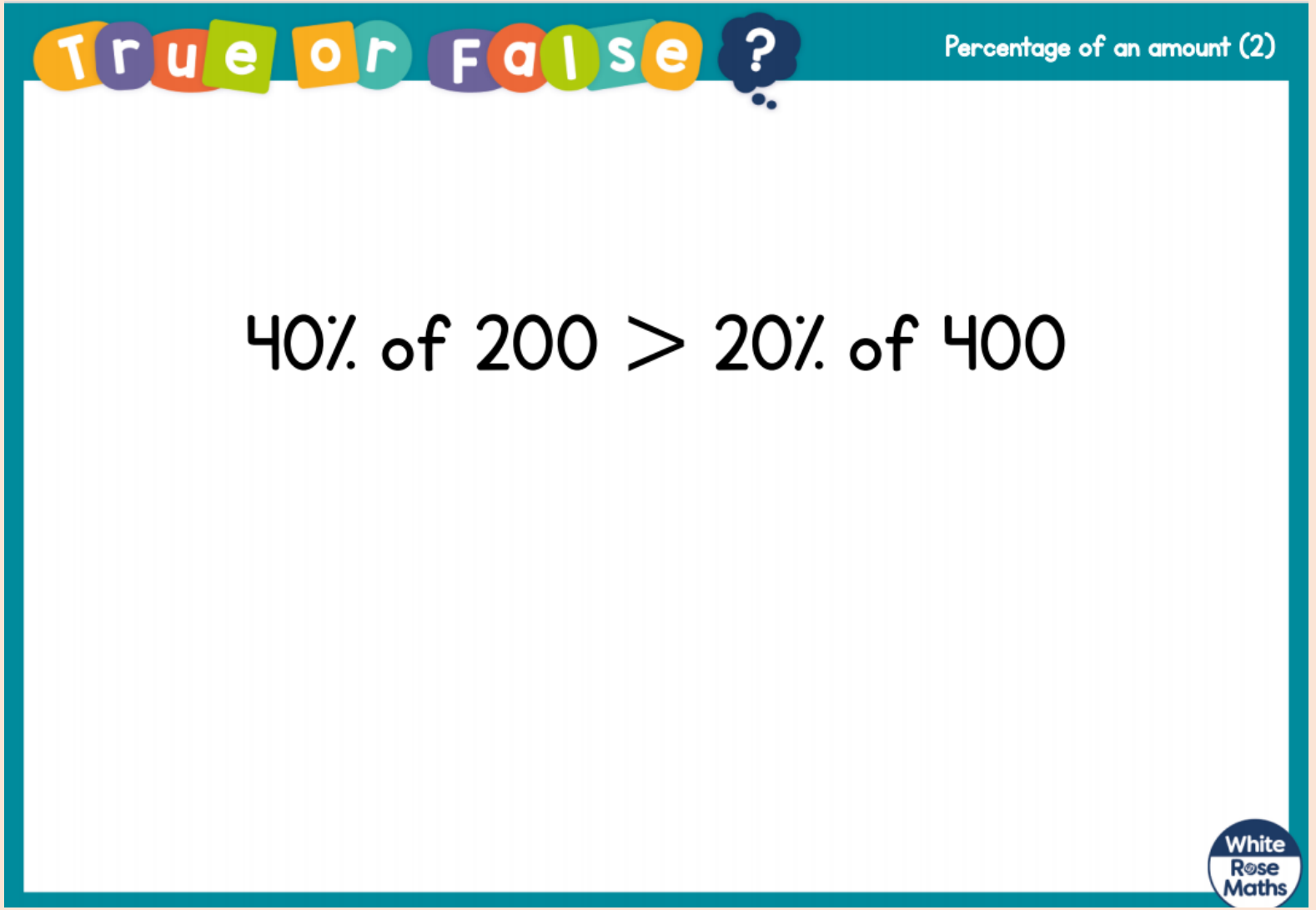
R

9b. Find a path to the gem by moving horizontally and vertically through the correct answers.

Start	88% of 360ml = 317.8	57% of £28 = £19.96	33% of 170 = 12
11% of 2m = 0.22m	17% of £30 = £5.10	28% of 30 = 8.4	22% of 3m = 66cm
62.5% of 80 = 50	10% of 3m = 6cm	87.5% of £260 = £227.50	

PS

Plenary


True or False ?
Percentage of an amount (2)
40% of 200 > 20% of 400
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Plenary

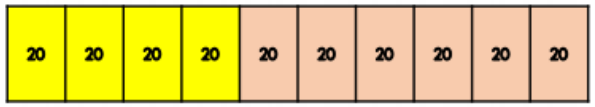
True or False?

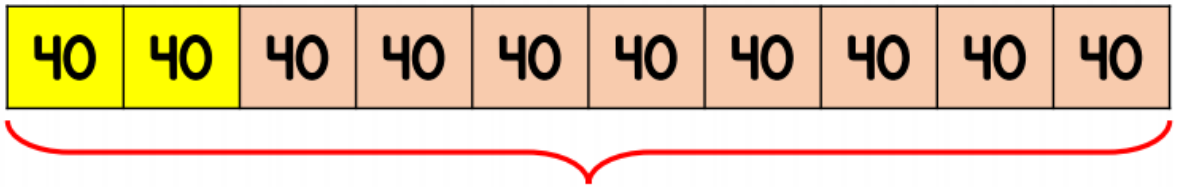
Percentage of an amount (2)

False

40% of 200 = 20% of 400

40% of 200 = 80





20% of 400 = 80

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Email your finished work to your class teacher!

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