

Diving into Mastery - Diving

Adult Guidance with Question Prompts

Children use number facts, place value knowledge, partitioning and counting skills to subtract a 1-digit number from a 2-digit number. Children will need a part-whole model and nine counters.

Look at your part-whole model to see how many jumps back Jill still needs to make.

Can you show me where she will land?

Can you use this to complete the calculation? $37 - 9 =$

Please use this sequence to investigate the other calculations.

Where is the calculation telling you to start?

Which way is the symbol telling you to go?

Can you use a part-whole model and counters to partition the number so that the first part brings us back to the closest multiple of ten?

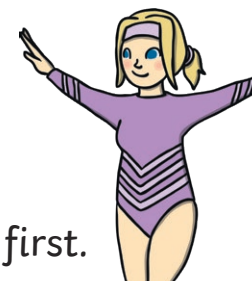
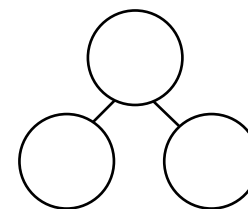
How many jumps do you still need to count back?

Where did you land?

Can you use this to complete the calculation?

Repeat this for the other calculations.

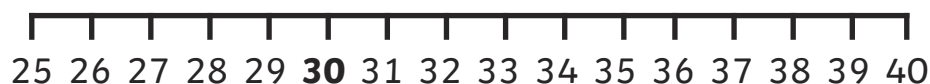
Subtract 1-Digit from 2 Digit Numbers Crossing Ten



Show Jump-Back Jill how she could subtract on these number lines.

Remember to land on a multiple of 10 first.

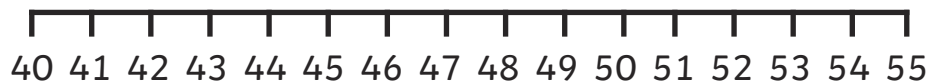
$$37 - 9$$



$$63 - 6$$



$$54 - 7$$



$$81 - 5$$



Diving into Mastery - Deeper

Adult Guidance with Question Prompts

Children use the strategy of partitioning numbers to subtract a 1-digit number from a 2-digit number to check subtraction calculations. They use mathematical language to explain whether the calculations are right or wrong and how they know. For the incorrect calculations, the children may be able to spot the mistake that has been made - for example, adding instead of subtracting, or subtracting too much. Children may need part-whole models, counters and number lines to check the calculations.

How can you tell if the calculation is correct?

What strategies could you use?

Can you convince me it is correct?

Can you prove it is wrong?

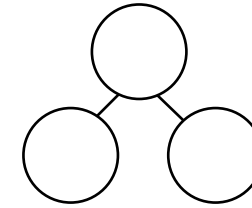
Where do you think Ben has gone wrong?

Can you find the correct answer?

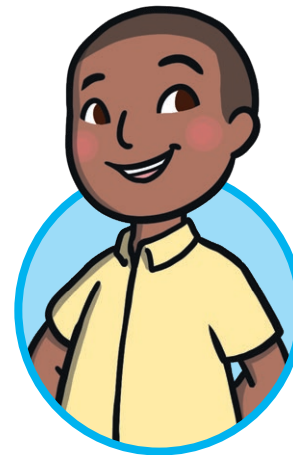
Was Anna right when she spotted three mistakes?

How many mistakes did Ben make?

Subtract 1-Digit from 2 Digit Numbers Crossing Ten



Ben has been subtracting 1-digit numbers.



$$45 - 8 = 37$$

$$72 - 4 = 76$$

$$31 - 6 = 24$$

$$94 - 7 = 87$$

$$26 - 9 = 17$$



I think you have got 3 of them wrong.

Do you agree with Anna? Prove it.
Correct any mistakes Ben has made.

Diving into Mastery - Deepest

Adult Guidance with Question Prompts

Children solve a 'find all possibilities' problem that involves subtracting a 1-digit number from a 2-digit number. Encourage systematic working and use of number lines and practical equipment as necessary.

What is the smallest digit that could go in the ones column next to the five tens?

Which number are we counting back to on the number line every time?

Can you show me on the number line how to count back from 50 to 48?

How many did you subtract?

What is the next number that we could try after 50?

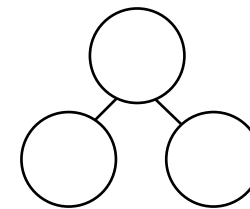
How could we work this out, so we don't miss any numbers out?

Do you think you have found all the combinations? Prove it.

How many ways did you find?

Compare the calculations you have written to someone else's. Are they the same?

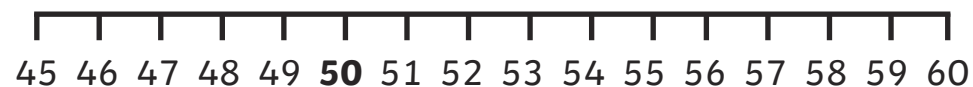
Are there any different ones?



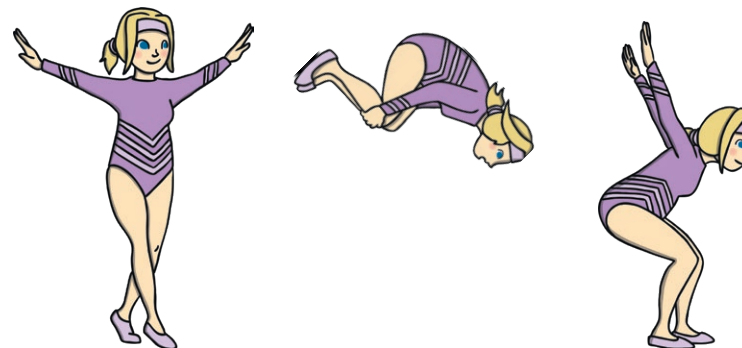
Investigate which digits are missing from this calculation:

$$5 \square - \square = 48$$

Use a number line to help you.



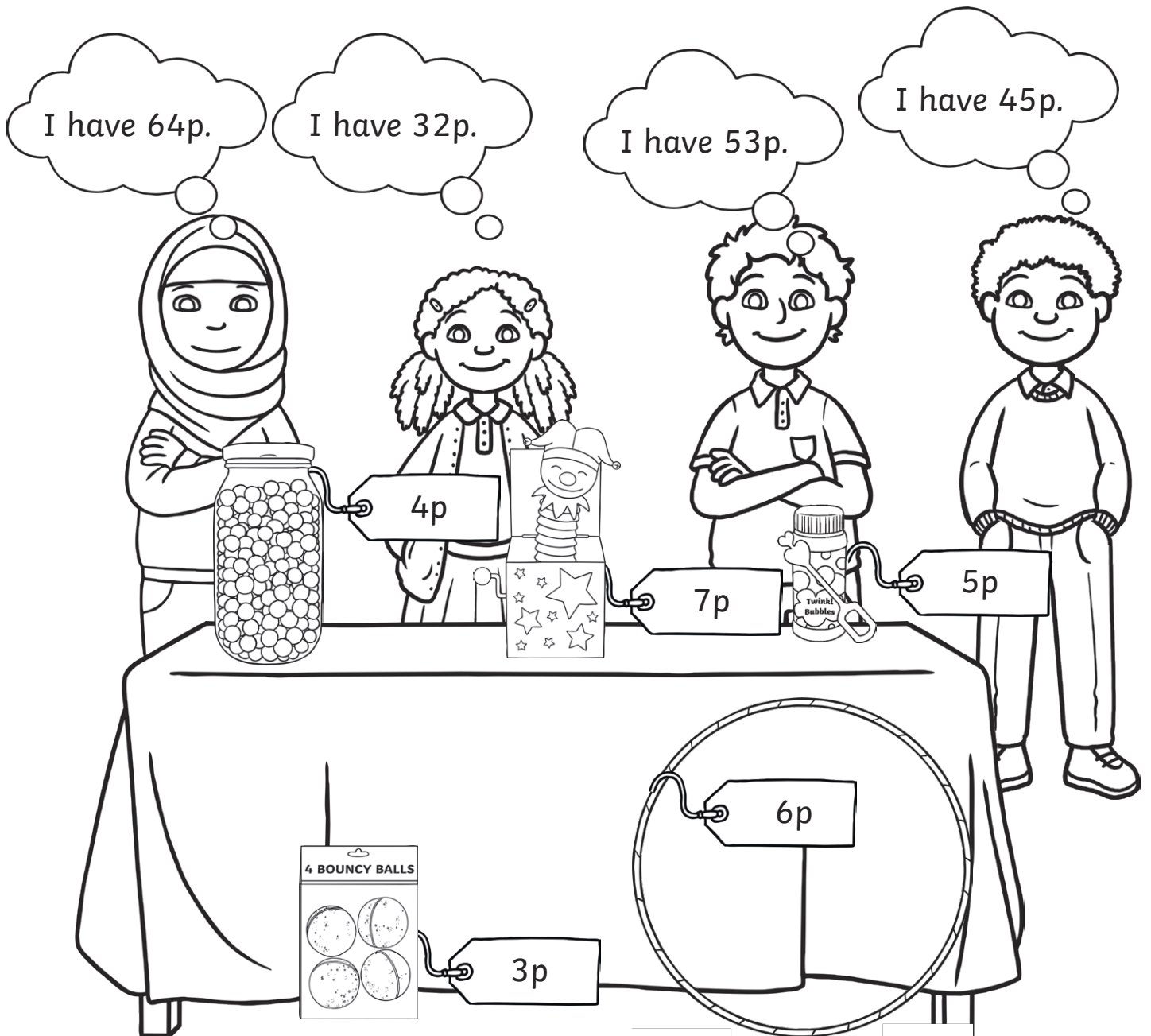
How many different combinations can you find?



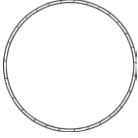








Gift Shop

To subtract a 1-digit number from a 2-digit number.

- Class 2 have been on a school trip to the circus.
- They each brought with them some money to spend in the gift shop.
- Choose one gift for each child to buy and work out how much they will have left.
- Use a ten-frame and draw a number line to help you.



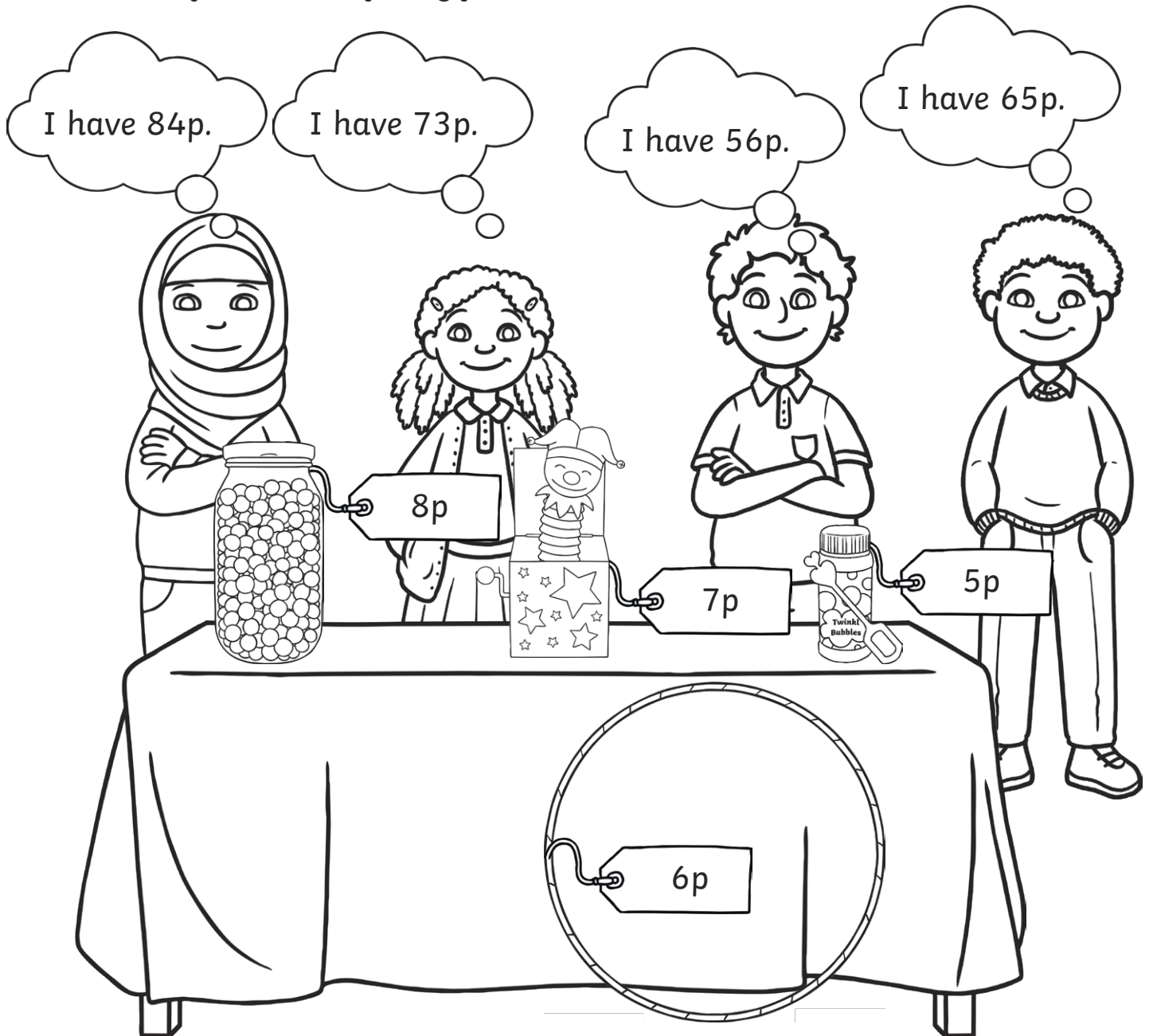
Answers

					
 64p	58p	60p	61p	59p	57p
 32p	26p	28p	29p	27p	25p
 53p	47p	49p	50p	48p	46p
 45p	39p	41p	42p	40p	38p

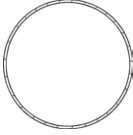
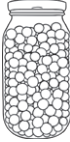






Gift Shop

I can subtract a 1-digit number from a 2-digit number.

- Class 2 have been on a school trip to the circus. They each brought with them some money to spend in the gift shop.
- Work out how much each child will have left if they buy the hoola hoop. Use a ten-frame and draw a number line to help you.
- Do the same for the rest of the gifts.



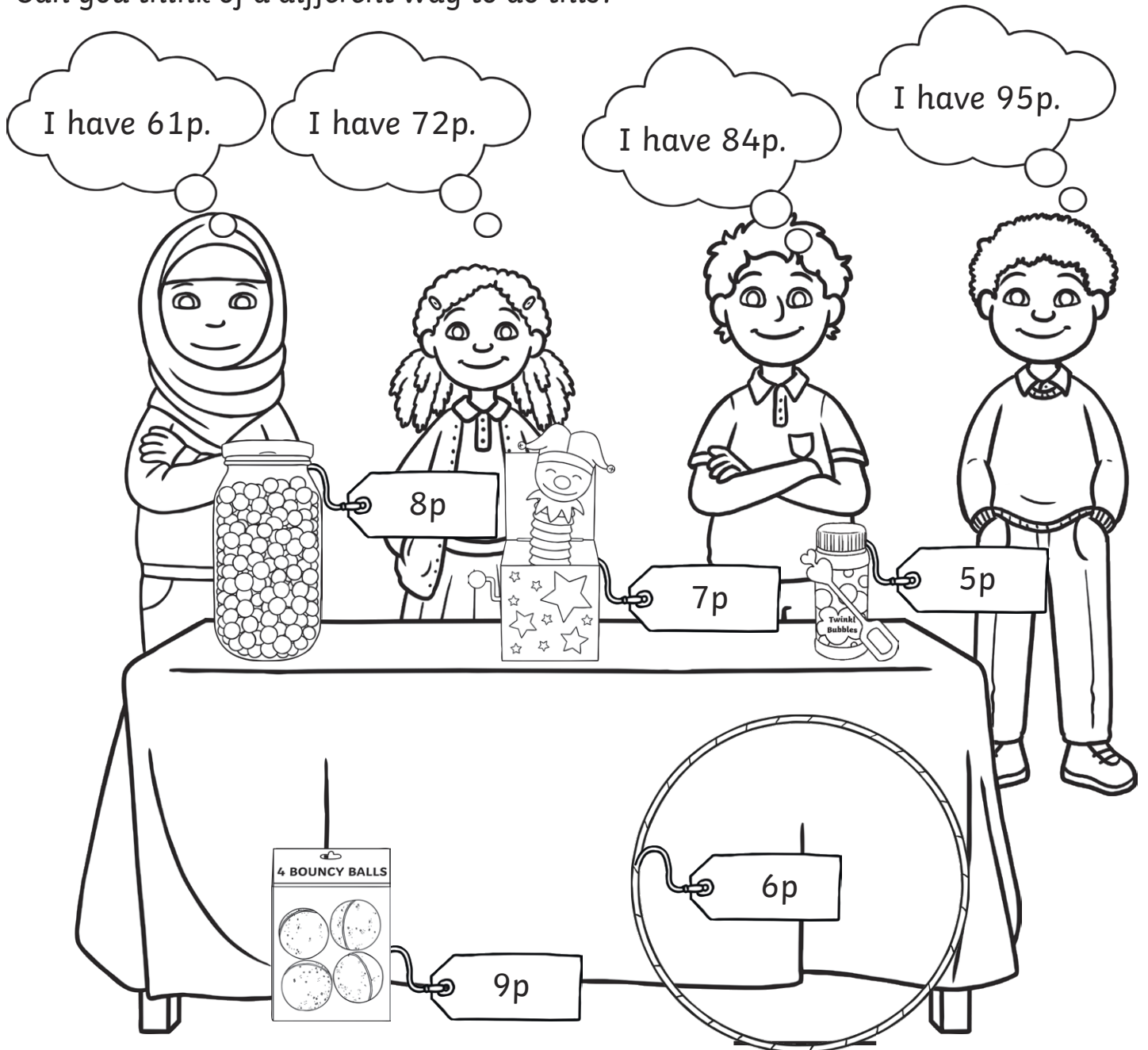
Answers

				
 84p	78p	76p	79p	77p
 73p	67p	65p	68p	66p
 56p	50p	48p	51p	49p
 65p	59p	57p	60p	58p

Gift Shop

I can subtract a 1-digit number from a 2-digit number.

- Class 2 have been on a school trip to the circus. They each brought with them some money to spend in the gift shop.
- Choose one gift for each child to buy and work out how much they will have left. Use a ten-frame and draw a number line to help you.
- Can you think of a different way to do this?



Gift Shop

Solve the puzzles below and write mathematical calculations to match them.

1. I had 92p and now I have 84p.

What did I buy?

2. I had 77p and now I have 68p.

What did I buy?

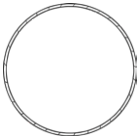








3. I bought the jack-in-the-box and now I have 84p.

How much money did I start with?

4. I bought a gift and now I have 68p.

How much might I have started with?

Answers

					
 61p	55p	53p	52p	56p	54p
 72p	66p	64p	63p	67p	65p
 84p	78p	76p	75p	79p	77p
 95p	89p	87p	86p	90p	88p

Solve the puzzles below and write number sentences to match them.

1. jar of sweets
2. bouncy balls
3. 91p
4. 73p, 74p, 75p, 76p, 77p

$$37 - 9 = 28$$

$$63 - 6 = 57$$

$$54 - 7 = 47$$

$$81 - 5 = 76$$



$72 - 4 = 76$ and $31 - 6 = 24$ are incorrect. The other calculations are correct.

Anna was wrong - Ben made two mistakes, not three.

$$72 - 4 = 68$$

$$31 - 6 = 25$$



Possible combinations are:

$50 - 2$, $51 - 3$, $52 - 4$, $53 - 5$, $54 - 6$, $55 - 7$, $56 - 8$, $57 - 9$

