

Reasoning and Problem Solving

Step 11: Add 2-Digit Numbers 1

National Curriculum Objectives:

Mathematics Year 2 (2C2a): [Add and subtract numbers mentally, including: a two-digit number and tens](#)

Mathematics Year 2 (2C2b): [Add and subtract numbers using concrete objects and pictorial representations, including: a two-digit number and tens](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Create and solve a calculation by adding two 2-digit numbers (totalling less than 50).

Expected Create and solve a calculation by adding two 2-digit numbers (totalling less than 100).

Greater Depth Create and solve a calculation by adding a 2-digit number to a 3-digit number (totalling less than 200).

Questions 2, 5 and 8 (Reasoning)

Developing Explain an error when adding two 2-digit numbers (totalling less than 50).

Expected Explain an error when adding two 2-digit numbers (totalling less than 100).

Greater Depth Explain an error when adding a 2-digit number to a 3-digit number (totalling less than 200).

Questions 3, 6 and 9 (Problem Solving)

Developing Solve a simple word problem by adding two 2-digit numbers (totalling less than 50). No exchanging.

Expected Solve a word problem by adding two 2-digit numbers (totalling less than 100). No exchanging.

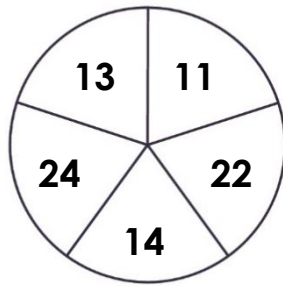
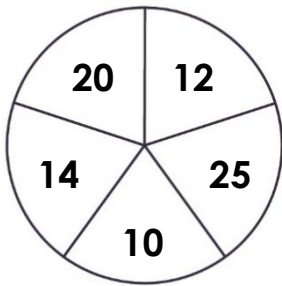
Greater Depth Solve a multi-step word problem by adding two 2-digit numbers to a 3-digit number (totalling less than 200). No exchanging.

[More resources](#) which follow the same small steps as White Rose.

Did you like this resource? Don't forget to [review](#) it on our website.

Add 2-Digit Numbers 1

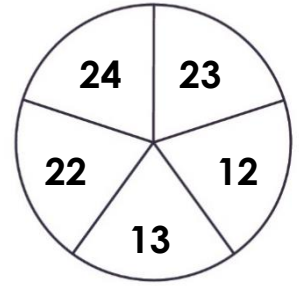
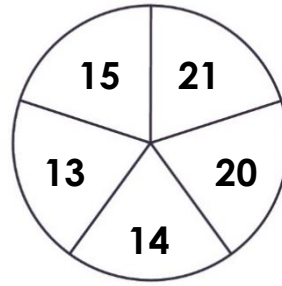
1a. Pick one 2-digit number from each wheel. Write the number sentence and solve the calculation.



PS

Add 2-Digit Numbers 1

1b. Pick one 2-digit number from each wheel. Write the number sentence and solve the calculation.



PS

2a. Malinda says,



I think $32 + 10$ is 33 because $3 + 0$ is 3 and $2 + 1$ is 3.

Is she correct? Explain why.



R

2b. Mehmet says,



I think $24 + 24 = 48$ because there are 4 tens and 8 ones.

Is he correct? Explain why.



R

3a. Vernon is counting snacks for his class.

There are 13 apples.

There are 26 oranges.

How many snacks are there in total?



PS

3b. Chriselda is counting the children in her class.

There are 14 boys.

There are 15 girls.

How many children are in her class?

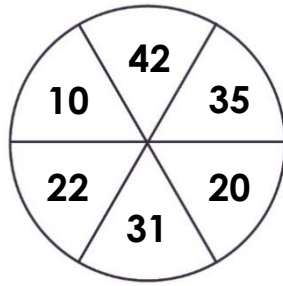
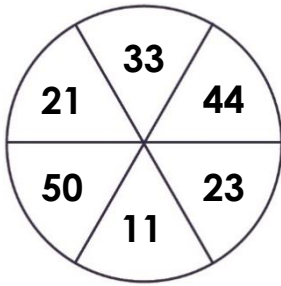


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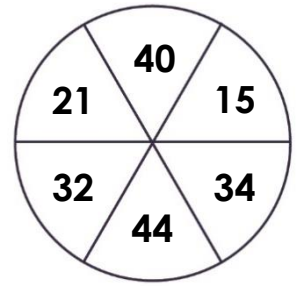
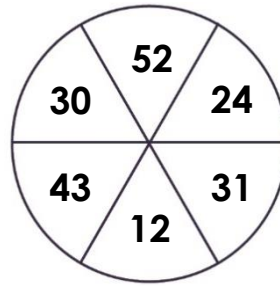
Add 2-Digit Numbers 1

Add 2-Digit Numbers 1

4a. Pick one 2-digit number from each wheel. Write the number sentence and solve the calculation.



4b. Pick one 2-digit number from each wheel. Write the number sentence and solve the calculation.



PS



PS

5a. Xander says,



I think $24 + 54$ is 69 because $2 + 4$ is 6 and $5 + 4$ is 9.

Is he correct? Explain why.



R

5b. Mischa says,



I think $43 + 30$ is 46 because $3 + 3$ is 6.

Is she correct? Explain why.



R

6a. Julia and Raheem are collecting money for charity.

Julia collects £34.

Raheem collects £55.

How much money do they collect altogether?



PS

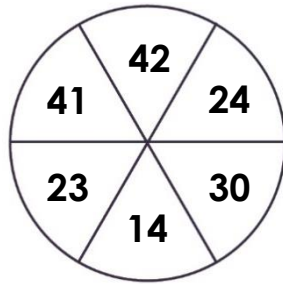
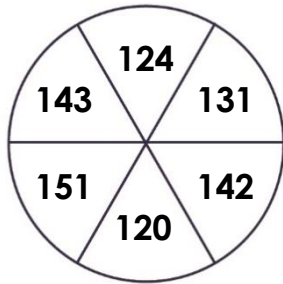


PS

Add 2-Digit Numbers 1

Add 2-Digit Numbers 1

7a. Pick one number from each wheel. Write the number sentence and solve the calculation.

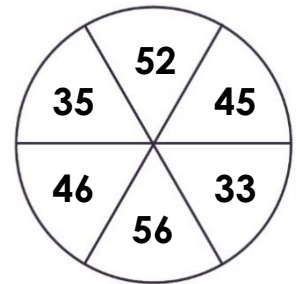
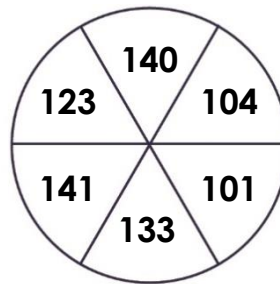


PS



PS

7b. Pick one number from each wheel. Write the number sentence and solve the calculation.



8a. Farrah says,



I think $104 + 35$ is 49 because $1 + 3$ is 4 and $4 + 5$ is 9.

Is she correct? Explain why.



R

8b. Jing says,



I think $108 + 91$ is 199 because there is one hundred, nine tens and 9 ones.

Is he correct? Explain why.



R

9a. Paulo and Fiona are building a tower. They need 68 blocks to complete the tower.

Paulo has 30 blocks.

Fiona has 22 more blocks than Paulo.

Do they have enough blocks to complete their tower?



PS

9b. Rory and Nathaniel are collecting stickers. They need 100 stickers to complete their album.

Nathaniel has 31 stickers.

Rory has 34 more stickers than Nathaniel.

Do they have enough stickers to complete their album?



PS

Reasoning and Problem Solving Add 2-Digit Numbers 1

Developing

1a. Various possible answers, for example:
 $20 + 13 = 33$, $25 + 24 = 49$; $14 + 22 = 36$

2a. Malinda is incorrect. She has swapped the tens and ones in her calculation. The correct answer is 42.

3a. $13 + 26 = 39$; there are 39 snacks in total.

Expected

4a. Various possible answers, for example:
 $33 + 20 = 53$, $21 + 35 = 56$, $11 + 42 = 53$

5a. Xander is incorrect. He has added the digits of each number together. The correct answer is 78.

6a. $34 + 55 = 89$; they collect £89 altogether.

Greater Depth

7a. Various possible answers, for example:
 $124 + 42 = 166$, $131 + 14 = 145$

8a. Farrah is incorrect. She has counted the hundred as a ten. The correct answer is 139.

9a. $30 + 22 = 52$, and $30 + 52 = 82$ blocks altogether; Yes, they can complete the tower.

Reasoning and Problem Solving Add 2-Digit Numbers 1

Developing

1b. Various possible answers, for example:
 $15 + 22 = 37$, $15 + 24 = 39$; $20 + 23 = 43$

2b. Mehmet is correct.

3b. $14 + 15 = 29$; there are 29 children in her class.

Expected

4b. Various possible answers, for example:
 $52 + 40 = 92$, $43 + 32 = 75$, $12 + 34 = 46$

5b. Mischa is incorrect. She has added 43 and 3 instead of 43 and 30. The correct answer is 73.

6b. $32 + 65 = 97$; she has 97 paint kits in total.

Greater Depth

7b. Various possible answers, for example:
 $140 + 33 = 173$, $141 + 52 = 193$

8b. Jing is correct.

9b. $34 + 31 = 65$, and $31 + 65 = 96$ stickers altogether; No, they cannot complete the album.