

Reasoning and Problem Solving

Step 5: Bonds to 100 (Tens)

National Curriculum Objectives:

Mathematics Year 2: (2C1) [Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Arrange cards to represent a number bond to 50 – find all the possibilities.

Expected Arrange cards to represent a number bond to 100 – find all the possibilities.

Greater Depth Identify and arrange the cards needed to represent a number bond to 100 – find all the possibilities.

Questions 2, 5 and 8 (Reasoning)

Developing Identify the incorrect number bond to 50 and explain why it is incorrect. Includes 3 number sentences.

Expected Identify the incorrect number bond to 100 and explain why it is incorrect. Includes 3 number sentences.

Greater Depth Identify the incorrect number bond to 100 and explain why it is incorrect. Includes 5 number sentences.

Questions 3, 6 and 9 (Problem Solving)

Developing Use knowledge of number bonds to 50 to identify two items which would cost £50 when bought together. Find all the possibilities.

Expected Use knowledge of number bonds to 100 to identify two items which would cost £100 when bought together. Find all the possibilities.

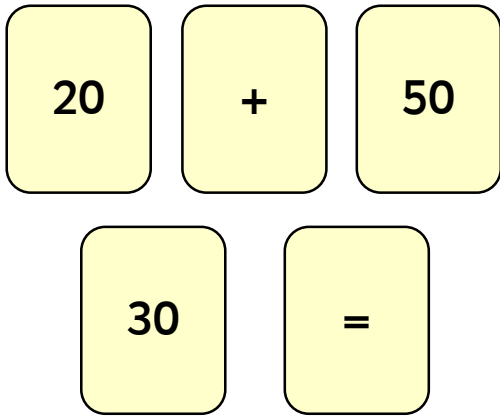
Greater Depth Use knowledge of number bonds to 100 to identify three items which would cost £100 when bought together. Find all the possibilities.

[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.

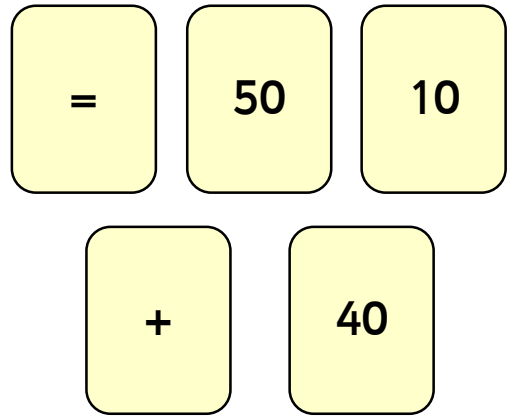
Reasoning and Problem Solving – Bonds to 100 (Tens)

1a. Arrange the cards below to create a number sentence. Find all the possibilities.



PS

1b. Arrange the cards below to create a number sentence. Find all the possibilities.



PS

2a. Circle the incorrect number sentence below.

$$40 + 10 = 50$$

$$50 + 0 = 50$$

$$50 = 30 + 10$$

Explain why it is incorrect.



R

2b. Circle the incorrect number sentence below.

$$20 + 30 = 50$$

$$50 = 30 + 20$$

$$50 + 10 = 50$$

Explain why it is incorrect.



R

3a. Danny spends £50 on two items. Find all the possible combinations.



£10



£20



£30



£50



£40



PS

3b. Kelly spends £50 on two items. Find all the possible combinations.



£50



£40



£10



£20



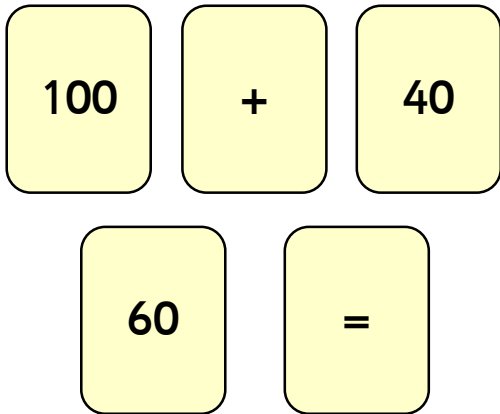
£30



PS

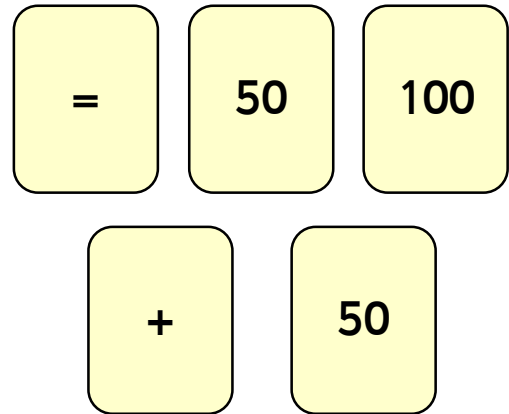
Reasoning and Problem Solving – Bonds to 100 (Tens)

4a. Arrange the cards below to create a number sentence. Find all the possibilities.



PS

4b. Arrange the cards below to create a number sentence. Find all the possibilities.



PS

5a. Circle the incorrect number sentence below.

$$70 + 30 = 100$$

$$50 + 40 = 100$$

$$100 = 80 + 20$$

Explain why it is incorrect.



R

5b. Circle the incorrect number sentence below.

$$40 + 60 = 100$$

$$100 = 10 + 90$$

$$20 + 70 = 100$$

Explain why it is incorrect.



R

6a. Anwar spends £100 on two items. Find all the possible combinations.



£10



£20



£30



£90



£70



PS

6b. Fay spends £100 on two items. Find all the possible combinations.



£60



£50



£40



£50



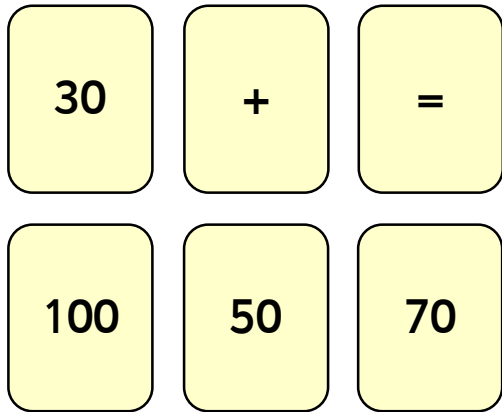
£40



PS

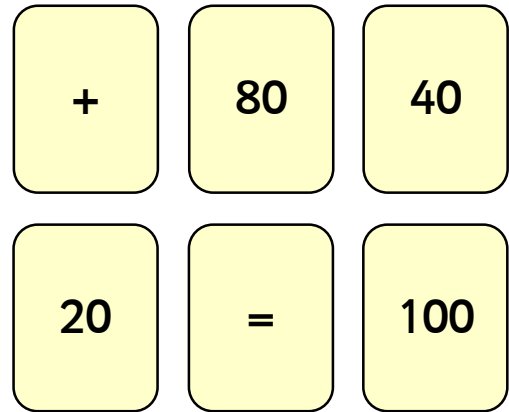
Reasoning and Problem Solving – Bonds to 100 (Tens)

7a. Identify the cards needed to create a number sentence. Arrange them in the correct order. Find all the possibilities.



PS

7b. Identify the cards needed to create a number sentence. Arrange them in the correct order. Find all the possibilities.



PS

8a. Circle the incorrect number sentence below.

- 100 = 50 + 50
- 90 + 10 = 100
- 50 + 50 = 100
- 100 = 20 + 80
- 60 = 40 + 100

Explain why it is incorrect.



R

8b. Circle the incorrect number sentence below.

- 40 + 60 = 100
- 100 = 10 + 90
- 90 + 100 = 10
- 50 + 50 = 100
- 30 + 70 = 100

Explain why it is incorrect.



R

9a. Kurt spends £100 on three items. Find all the possible combinations.



PS

9b. Rachna spends £100 on three items. Find all the possible combinations.



PS

Reasoning and Problem Solving – Bonds to 100 (Tens)

Developing

1a. $20 + 30 = 50$; $30 + 20 = 50$; $50 = 20 + 30$; $50 = 30 + 20$

1b. $10 + 40 = 50$; $40 + 10 = 50$; $50 = 10 + 40$; $50 = 40 + 10$

2a. $50 = 30 + 10$ is incorrect because $30 + 10 = 40$

The number sentence should be either $50 = 30 + 20$ or $50 = 40 + 10$

2b. $50 + 10 = 50$ is incorrect because $50 + 10 = 60$

The number sentence should be either $50 + 0 = 50$ or $40 + 10 = 50$

3a. 1. Football £10 and Robot £40

2. Drum £20 and Keyboard £30

3b. 1. Hobby Horse £10 and Game Controller £40

2. Dinosaur wind-up toy £20 and Jack-in-the-box £30

Expected

4a. $60 + 40 = 100$; $40 + 60 = 100$; $100 = 60 + 40$; $100 = 40 + 60$

4b. $50 + 50 = 100$; $100 = 50 + 50$

5a. $50 + 40 = 100$ is incorrect because $50 + 40 = 90$

The number sentence should be either $50 + 50 = 100$ or $60 + 40 = 100$

5b. $20 + 70 = 100$ is incorrect because $20 + 70 = 90$

The number sentence should be either $20 + 80 = 100$ or $30 + 70 = 100$

6a. 1. Football £10 and Scooter £90

2. Keyboard £30 and Robot £70

6b. 1. Rocket £60 and Hobby Horse £40

2. Rocket £60 and Jack-in-the-box £40

3. Game Controller £50 and Dinosaur wind-up toy £50

Greater Depth

7a. $70 + 30 = 100$; $30 + 70 = 100$; $100 = 70 + 30$; $100 = 30 + 70$

7b. $80 + 20 = 100$; $20 + 80 = 100$; $100 = 80 + 20$; $100 = 20 + 80$

8a. $60 = 40 + 100$ is incorrect because the numbers are in the wrong order. The number sentence should be $100 = 40 + 60$ or $100 = 60 + 40$

8b. $90 + 100 = 10$ is incorrect because the numbers are in the wrong order. The number sentence should be $90 + 10 = 100$ or $10 + 90 = 100$

9a. 1. Football £20, Drum £30 and Scooter £50

2. Keyboard £40, Robot £40 and Football £20

9b. 1. Rocket £60, Hobby Horse £20 and Jack-in-the-box £20

2. Rocket £60, Game Controller £30 and Dinosaur wind-up toy £10