

Reasoning and Problem Solving

Step 4: Odd and Even Numbers

National Curriculum Objectives:

Mathematics Year 2: (2C6) [Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Record the possible odd or even combinations when rolling one dice.

Expected Record the possible odd or even combinations when rolling two dice.

Greater Depth Record the possible odd or even combinations when rolling three dice.

Questions 2, 5 and 8 (Problem Solving)

Developing Choose the correct odd and even numbers required to balance the scales (numbers to 20).

Expected Choose the correct odd and even numbers required to balance the scales (numbers to 5).

Greater Depth Choose the correct odd and even numbers required to balance the scales (numbers to 50). Includes adding 3 numbers.

Questions 3, 6 and 9 (Reasoning)

Developing Explain who is correct from the given statements. Using numbers to 20.

Expected Explain who is correct from the given statements. Using numbers to 50.

Greater Depth Explain who is correct from the given statements. Using numbers to 50 which are written in words.

[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.

Odd and Even Numbers

1a. Daniel rolls one dice. His answer is an even number.



What numbers could Daniel have rolled?

Write down all the possibilities.



PS

Odd and Even Numbers

1b. Kayla rolls one dice. Her answer is an odd number.



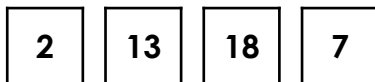
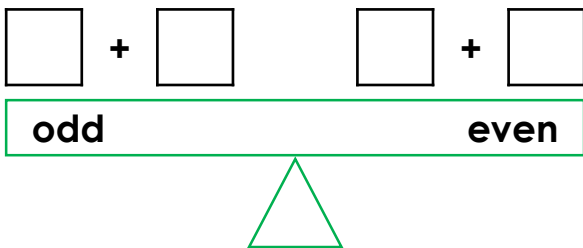
What numbers could Kayla have rolled?

Write down all the possibilities.



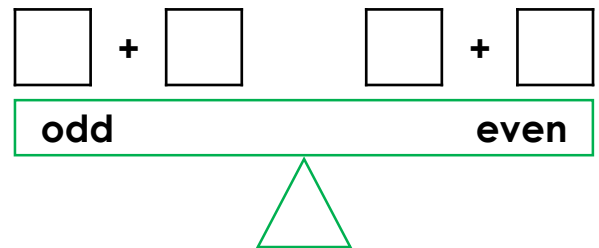
PS

2a. Choose the correct numbers to balance the scales.



PS

2b. Choose the correct numbers to balance the scales.



PS

3a. Hayley and Erik have 16 sweets altogether.



Hayley

We have an odd amount of sweets.

We have an even amount of sweets.



Erik

Who is correct? Convince me.



R

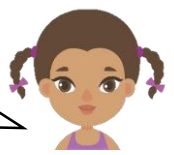
3b. Chen and Maeve have 13 cards altogether.



Chen

We have an odd amount of cards.

We have an even amount of cards.



Maeve

Who is correct? Convince me.



R

Odd and Even Numbers

4a. Julie rolls two dice. Her answer is an even number between 3 and 9.



What numbers could Julie have rolled?

Write down three possibilities as addition calculations.



PS

Odd and Even Numbers

4b. Clara rolls two dice. Her answer is an odd number between 4 and 10.



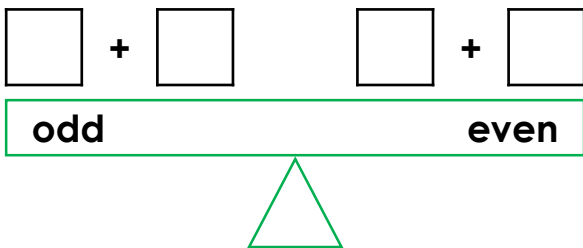
What numbers could Clara have rolled?

Write down three possibilities as addition calculations.



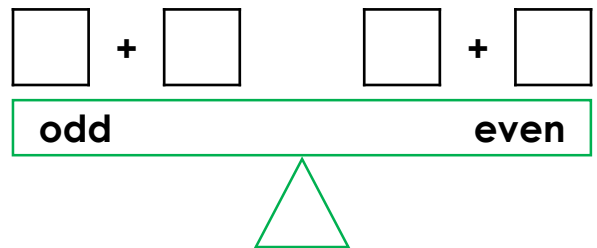
PS

5a. Choose the correct numbers to balance the scales.



PS

5b. Choose the correct numbers to balance the scales.



PS

6a. Keelan and Nicola have 34 stickers altogether.



We have an odd amount of stickers.

Keelan

We have an even amount of stickers.



Nicola

Who is correct? Convince me.



R

6b. Kamron and Helen have 45 pens altogether.



We have an odd amount of pens.

Kamron

we have an even amount of pens.



Helen

Who is correct? Convince me.



R

Odd and Even Numbers

7a. Allie rolls three dice. Her answer is an even number between 9 and 13.



What numbers could Allie have rolled?

Write down three possibilities as addition calculations.



PS

Odd and Even Numbers

7b. Emmett rolls three dice. His answer is an odd number between 8 and 12.



What numbers could Emmett have rolled?

Write down three possibilities as addition calculations.



PS

8a. Choose the correct numbers to balance the scales.



odd

even



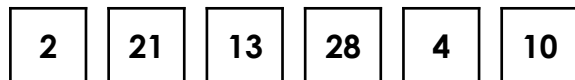
PS

8b. Choose the correct numbers to balance the scales.



odd

even



PS

9a. Devan and Averi are given twelve crayons each. They add them together.



Devan

We have an odd amount of crayons.

We have an even amount of crayons.



Averi

Who is correct? Convince me.



R

9b. Janiyah and Jamir are given eleven marbles each. They add them together.



Janiyah

We have an odd amount of marbles.

We have an even amount of marbles.



Jamir

Who is correct? Convince me.



R

Reasoning and Problem Solving Odd and Even Numbers

Developing

1a. 2, 4, 6

2a. $13 + 7 = 2 + 18$

3a. Erik is correct. 16 is an even number because it can be divided equally by 2.

Expected

4a. Any combinations totalling 4, 6 or 8, for example: $2 + 2 = 4$, $3 + 1 = 4$, $4 + 2 = 6$.

5a. $11 + 19 = 22 + 8$

6a. Nicola is correct. 34 is an even number because it can be divided equally by 2.

Greater Depth

7a. Any combinations totalling 10 or 12, for example: $1 + 4 + 5 = 10$, $2 + 4 + 4 = 10$, $3 + 3 + 4 = 10$.

8a. $13 + 13 = 10 + 14 + 2$

9a. Averi is correct. 24 is an even number because it can be divided equally by 2.

Reasoning and Problem Solving Odd and Even Numbers

Developing

1b. 1, 3, 5

2b. $11 + 9 = 6 + 14$

3b. Chen is correct. 13 is an odd number because it cannot be divided equally by 2.

Expected

4b. Any combinations totalling 5, 7 or 9, for example: $1 + 4 = 5$, $2 + 3 = 5$, $1 + 6 = 7$.

5b. $9 + 21 = 14 + 16$

6b. Kamron is correct. 45 is an odd number because it cannot be divided equally by 2.

Greater Depth

7b. Any combinations totalling 9 or 11, for example: $1 + 4 + 4 = 9$, $3 + 3 + 3 = 9$, $2 + 3 + 4 = 9$.

8b. $21 + 13 = 28 + 2 + 4$

9b. Jamir is correct. 22 is an even number because it can be divided equally by 2.