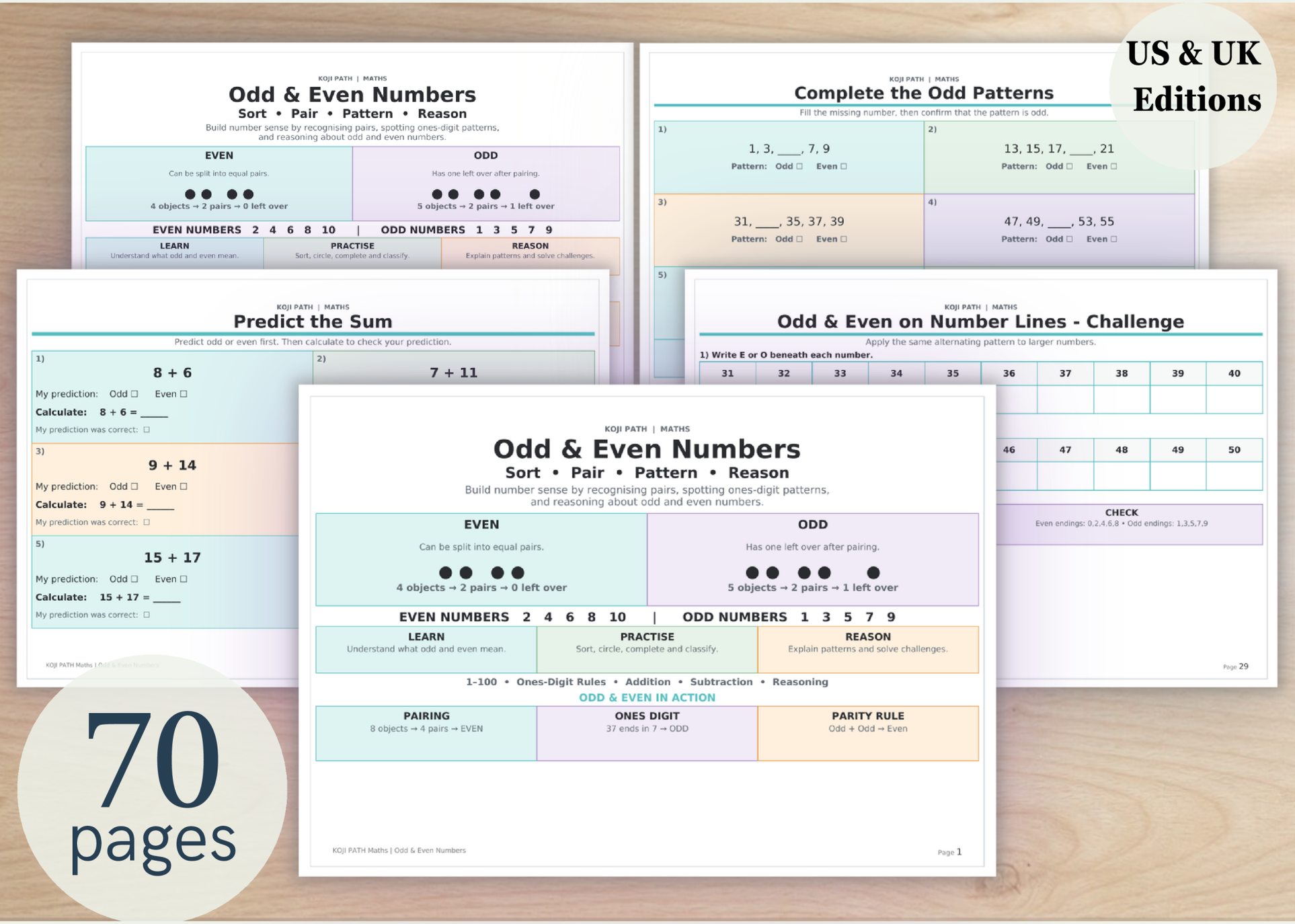
Odd & Even Numbers

Sort • Pair • Pattern • Reason

SPOT • CLASSIFY • PREDICT • EXPLAIN



US & UK Editions

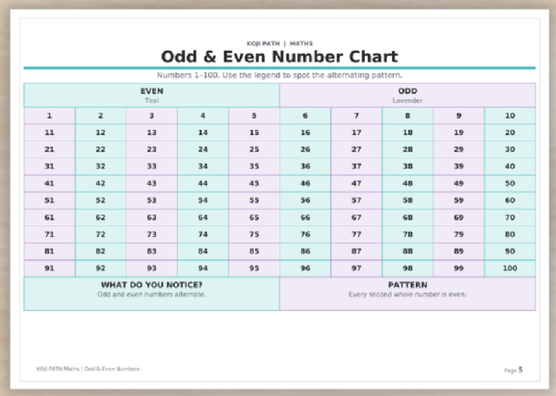
70 pages

Classification • Number Patterns • Parity Rules • Reasoning

What's Included

A look inside both 70-page A4 editions

- What Makes Numbers Odd or Even?
- Odd & Even Number Chart 1–100
- Sorting & Classification Activities
- 2-Digit, 3-Digit & 4-Digit Numbers
- Number Patterns & Number Lines
- Addition & Subtraction Parity
- Multiplication Parity Extension
- Riddles, Reasoning & Real-Life Problems
- Mixed Review & Challenges
- Full Worked Solutions



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Odd & Even Number Chart

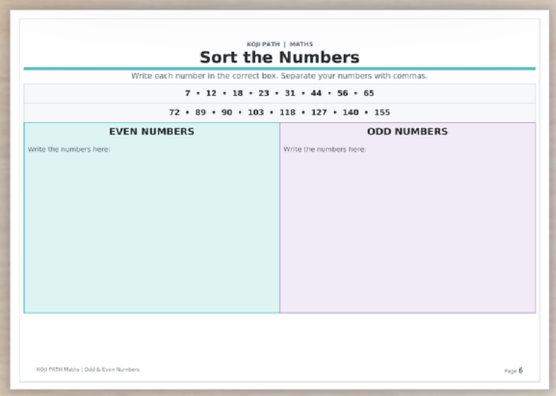
Numbers 1–100. Use the legend to spot the alternating pattern.

EVEN (Teal)					ODD (Lavender)				
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

WHAT DO YOU NOTICE? Odd and even numbers alternate.

PATTERN Every second whole number is even.

KOJI PATH Maths | Odd & Even Numbers — Page 5



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Sort the Numbers

Write each number in the correct box. Separate your numbers with commas.

7 • 12 • 18 • 23 • 31 • 44 • 56 • 65

72 • 89 • 90 • 103 • 118 • 127 • 140 • 155

EVEN NUMBERS	ODD NUMBERS
Write the numbers here:	Write the numbers here:

KOJI PATH Maths | Odd & Even Numbers — Page 6

Includes both UK & US editions



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What Happens When We Add?

Odd and even numbers follow reliable addition patterns.

EVEN + EVEN	ODD + ODD	ODD + EVEN
2 + 4 = 6 EVEN	3 + 5 = 8 EVEN	3 + 4 = 7 ODD
Same parity → even sum	Same parity → even sum	Different parity → odd sum

WHY ODD + ODD BECOMES EVEN

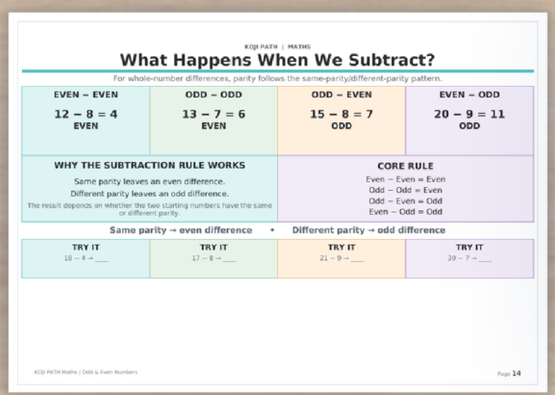
Each odd number has one leftover. The two leftovers make a new pair.

CORE RULE

Even + Even = Even
Odd + Odd = Even
Odd + Even = Odd

CHECK	CHECK	CHECK
6 + 8 = 14 → EVEN	7 + 9 = 16 → EVEN	5 + 12 = 17 → ODD

KOJI PATH Maths | Odd & Even Numbers — Page 12



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What Happens When We Subtract?

For whole-number differences, parity follows the same-parity/different-parity pattern.

EVEN − EVEN	ODD − ODD	ODD − EVEN	EVEN − ODD
12 − 8 = 4 EVEN	13 − 7 = 6 EVEN	15 − 8 = 7 ODD	20 − 9 = 11 ODD

WHY THE SUBTRACTION RULE WORKS

Same parity leaves an even difference.
Different parity leaves an odd difference.
The result depends on whether the two starting numbers have the same or different parity.

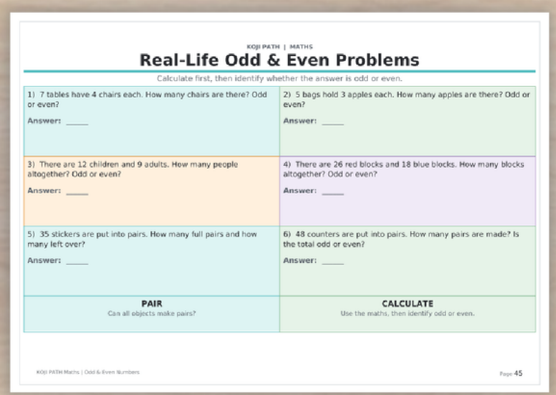
CORE RULE

Even − Even = Even
Odd − Odd = Even
Odd − Even = Odd
Even − Odd = Odd

Same parity → even difference • Different parity → odd difference

TRY IT	TRY IT	TRY IT	TRY IT
18 − 4 = ___	17 − 8 = ___	21 − 9 = ___	39 − 7 = ___

KOJI PATH Maths | Odd & Even Numbers — Page 14



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Real-Life Odd & Even Problems

Calculate first, then identify whether the answer is odd or even.

1) 7 tables have 4 chairs each. How many chairs are there? Odd or even?
Answer: ____

2) 5 bags hold 3 apples each. How many apples are there? Odd or even?
Answer: ____

3) There are 12 children and 9 adults. How many people altogether? Odd or even?
Answer: ____

4) There are 26 red blocks and 18 blue blocks. How many blocks altogether? Odd or even?
Answer: ____

5) 35 stickers are put into pairs. How many full pairs and how many left over?
Answer: ____

6) 48 counters are put into pairs. How many pairs are made? Is the total odd or even?
Answer: ____

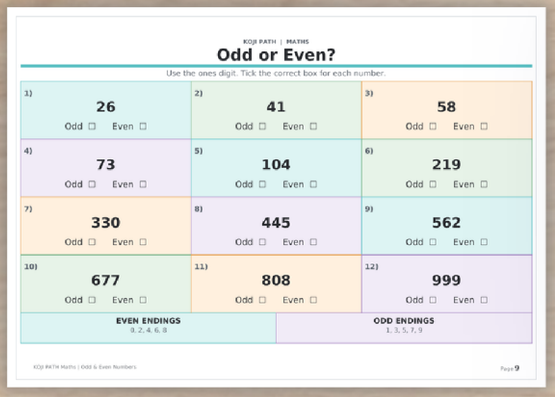
PAIR Can all objects make pairs?

CALCULATE Use the maths, then identify odd or even.

KOJI PATH Maths | Odd & Even Numbers — Page 45

Build Strong Odd & Even Reasoning

Is It Odd or Even?



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Odd or Even?

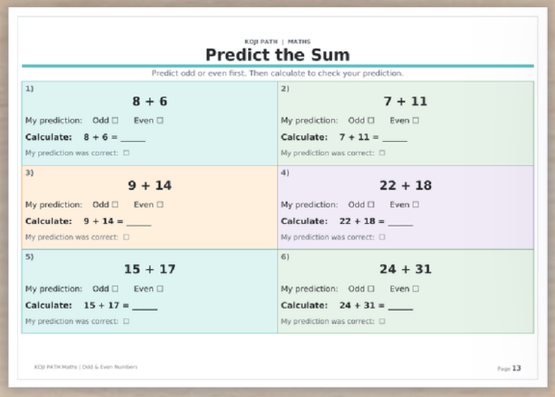
Use the ones digit. Tick the correct box for each number.

1) 26 Odd ☐ Even ☐	2) 41 Odd ☐ Even ☐	3) 58 Odd ☐ Even ☐
4) 73 Odd ☐ Even ☐	5) 104 Odd ☐ Even ☐	6) 219 Odd ☐ Even ☐
7) 330 Odd ☐ Even ☐	8) 445 Odd ☐ Even ☐	9) 562 Odd ☐ Even ☐
10) 677 Odd ☐ Even ☐	11) 808 Odd ☐ Even ☐	12) 999 Odd ☐ Even ☐

EVEN ENDINGS 0, 2, 4, 6, 8 | **ODD ENDINGS** 1, 3, 5, 7, 9

KOJI PATH Maths | Odd & Even Numbers Page 9

What Pattern Do I Notice?



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Predict the Sum

Predict odd or even first. Then calculate to check your prediction.

1) 8 + 6 My prediction: Odd ☐ Even ☐ **Calculate:** 8 + 6 = ____ My prediction was correct: ☐	2) 7 + 11 My prediction: Odd ☐ Even ☐ **Calculate:** 7 + 11 = ____ My prediction was correct: ☐
3) 9 + 14 My prediction: Odd ☐ Even ☐ **Calculate:** 9 + 14 = ____ My prediction was correct: ☐	4) 22 + 18 My prediction: Odd ☐ Even ☐ **Calculate:** 22 + 18 = ____ My prediction was correct: ☐
5) 15 + 17 My prediction: Odd ☐ Even ☐ **Calculate:** 15 + 17 = ____ My prediction was correct: ☐	6) 24 + 31 My prediction: Odd ☐ Even ☐ **Calculate:** 24 + 31 = ____ My prediction was correct: ☐

KOJI PATH Maths | Odd & Even Numbers Page 13

Can I Explain Why?



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Odd & Even Challenge

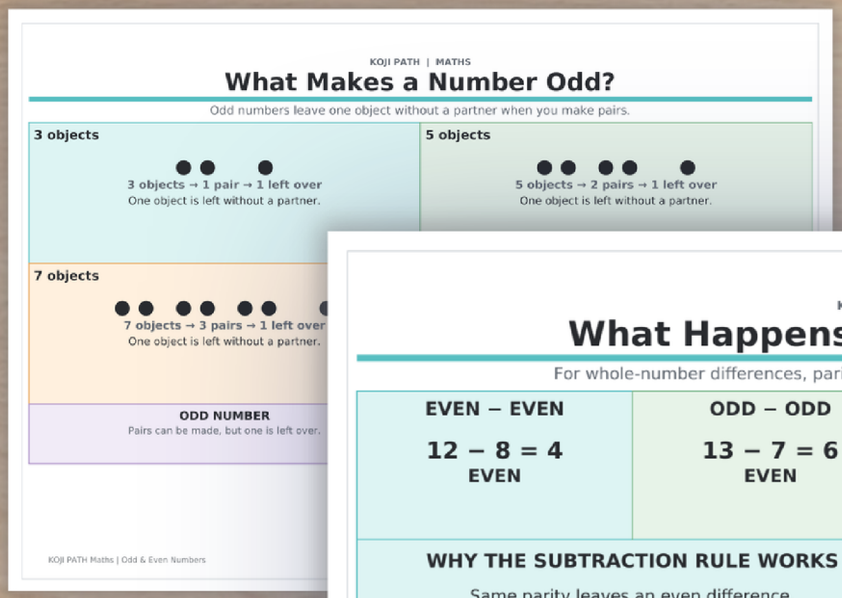
Use more than one idea to solve each question. Show your reasoning where needed.

1) I am between 40 and 50. I am odd. My digits add to 9. What number am I? **My number:** ____	2) I am an even number greater than 70 but less than 80. My ones digit is 6. What number am I? **My number:** ____
3) Two odd numbers are added. Can the sum ever be odd? Explain. **Explain:**	4) An even number and an odd number are added. Can the sum ever be even? Explain. **Explain:**
REASON Use the pattern, not just a guess.	**EXPLAIN** A complete answer tells why.

KOJI PATH Maths | Odd & Even Numbers Page 17

Sort • Spot Patterns • Predict • Reason • Explain

Worked Examples & Solutions


KOJI PATH | MATHS

What Makes a Number Odd?

Odd numbers leave one object without a partner when you make pairs.

3 objects

3 objects → 1 pair → 1 left over

One object is left without a partner.

5 objects

5 objects → 2 pairs → 1 left over

One object is left without a partner.

7 objects

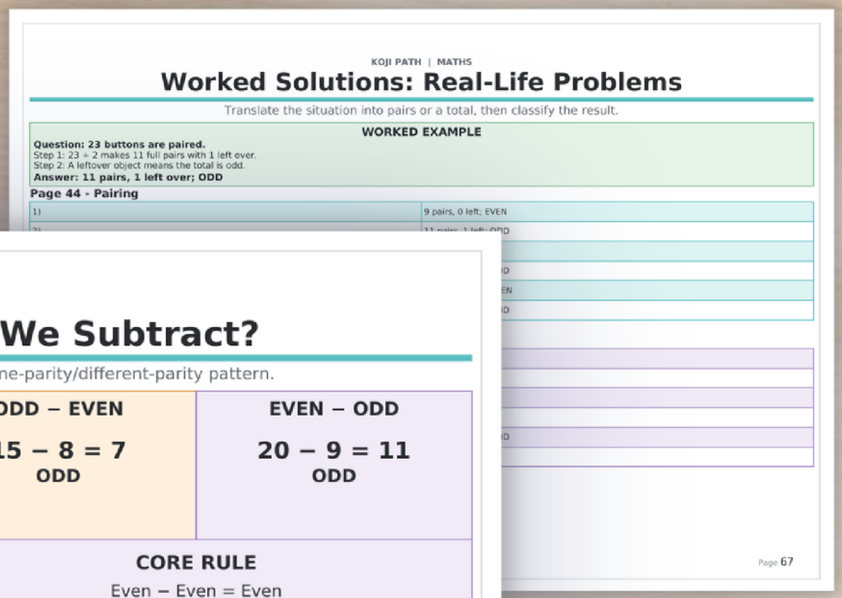
7 objects → 3 pairs → 1 left over

One object is left without a partner.

ODD NUMBER

Pairs can be made, but one is left over.

KOJI PATH Maths | Odd & Even Numbers


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Worked Solutions: Real-Life Problems

Translate the situation into pairs or a total, then classify the result.

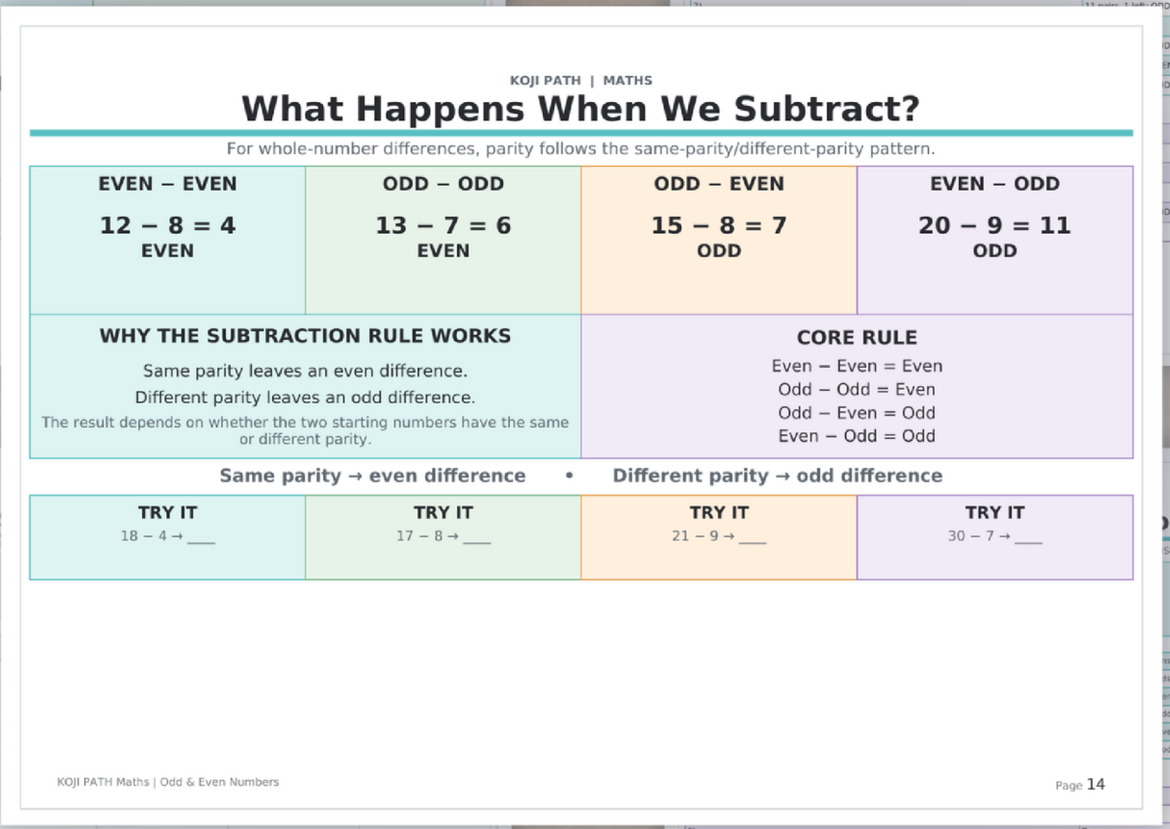
WORKED EXAMPLE

Question: 23 buttons are paired.
Step 1: 23 ÷ 2 makes 11 full pairs with 1 left over.
Step 2: A leftover object means the total is odd.
Answer: 11 pairs, 1 left over; ODD

Page 44 - Pairing

1)	9 pairs, 0 left; EVEN

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What Happens When We Subtract?

For whole-number differences, parity follows the same-parity/different-parity pattern.

EVEN − EVEN	ODD − ODD	ODD − EVEN	EVEN − ODD
12 − 8 = 4 EVEN	13 − 7 = 6 EVEN	15 − 8 = 7 ODD	20 − 9 = 11 ODD

WHY THE SUBTRACTION RULE WORKS

Same parity leaves an even difference.

Different parity leaves an odd difference.

The result depends on whether the two starting numbers have the same or different parity.

CORE RULE

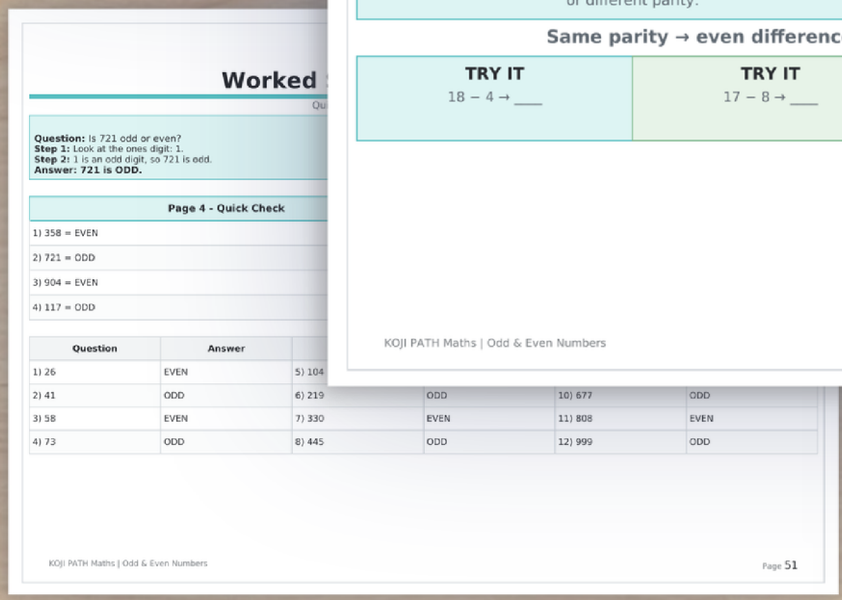
Even − Even = Even
Odd − Odd = Even
Odd − Even = Odd
Even − Odd = Odd

Same parity → even difference • **Different parity → odd difference**

TRY IT	TRY IT	TRY IT	TRY IT
18 − 4 → ___	17 − 8 → ___	21 − 9 → ___	30 − 7 → ___

KOJI PATH Maths | Odd & Even Numbers

Page 14


Worked

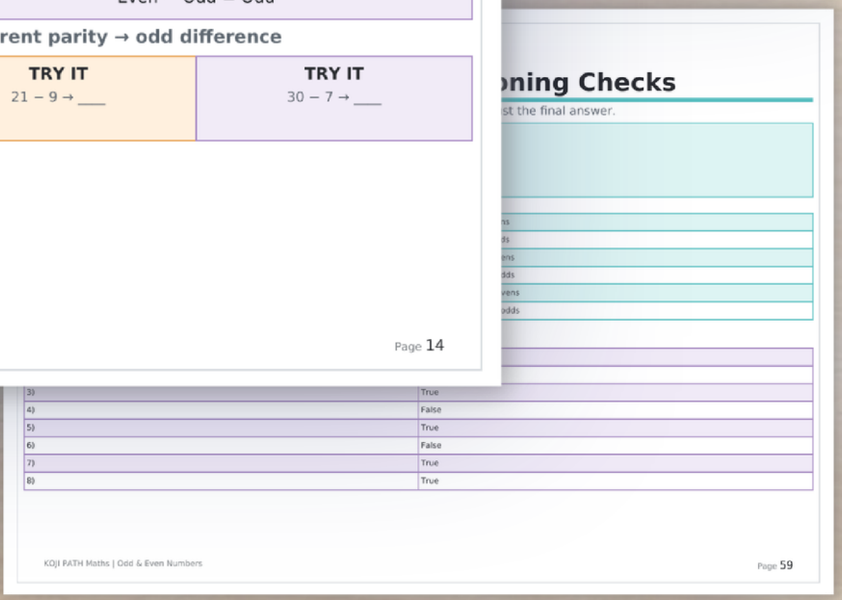
Question: Is 721 odd or even?
Step 1: Look at the ones digit: 1.
Step 2: 1 is an odd digit, so 721 is odd.
Answer: 721 is ODD.

Page 4 - Quick Check
1) 358 = EVEN
2) 721 = ODD
3) 904 = EVEN
4) 117 = ODD

Question	Answer				
1) 26	EVEN	5) 104			
2) 41	ODD	6) 219	ODD	10) 677	ODD
3) 58	EVEN	7) 330	EVEN	11) 808	EVEN
4) 73	ODD	8) 445	ODD	12) 999	ODD

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ning Checks

st the final answer.

3)	True
4)	False
5)	True
6)	False
7)	True
8)	True

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See the Method • Check the Answers • Review the Reasoning