

Luna's Space Adventure

Grade 4 · Number patterns · 4.OA.C.5

Name _____

Date _____



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Follow the rule Keep going with the same rule.

20, 28, 36, , , ,

4, 14, 24, , , ,

15, 19, 23, , , ,

5, 15, 25, , , ,

18, 28, 38, , , ,

Find the rule What is being added each time?

22, 24, 26, 28, 30, ...

16, 28, 40, 52, 64, ...

17, 23, 29, 35, 41, ...

11, 14, 17, 20, 23, ...

Odd or even? Start at an odd number and add 4 each time. Look at the terms.

Start at 5, add 4. Every term is...

odd **even**

Start at 6, add 3. The terms are...

all even **odd and even in turn**

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ANSWER KEY



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Follow the rule Keep going with the same rule.

20,	28,	36,	44,	52,	60,	68
4,	14,	24,	34,	44,	54,	64
15,	19,	23,	27,	31,	35,	39
5,	15,	25,	35,	45,	55,	65
18,	28,	38,	48,	58,	68,	78

Find the rule What is being added each time?

22, 24, 26, 28, 30, ...

add 2

16, 28, 40, 52, 64, ...

add 12

17, 23, 29, 35, 41, ...

add 6

11, 14, 17, 20, 23, ...

add 3

Odd or even? Start at an odd number and add 4 each time. Look at the terms.

Start at 5, add 4. Every term is...

odd even

Start at 6, add 3. The terms are...

all even

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GUIDE

1 What this sheet practises

Number patterns that follow a rule, like add 7. Your child continues a pattern, finds the rule, and notices things the rule doesn't say, like every number being odd.

2 A problem from the sheet, worked out

Follow the rule Keep going with the same rule.

20,	28,	36,	44,	52,	60,	68
4,	14,	24,	34,	44,	54,	64
15,	19,	23,	27,	31,	35,	39
5,	15,	25,	35,	45,	55,	65

How: Find the rule by checking the jump from each number to the next. Use the same jump every time to fill the gaps, then check that the numbers already shown still fit.

3 Words to know

pattern numbers that change by a rule

rule what happens each step, like add 7

term one number in a pattern

odd and even numbers that don't or do split into pairs

4 Watch for

- Finding the jump from only the first two numbers and not checking the rest.
- An adding slip early on, which throws off every number after it.
- Guessing odd or even without writing out a few numbers first.

5 Where it fits

BEFORE

3.OA.D.9

Find and explain patterns in addition and multiplication tables.

THIS SHEET

4.OA.C.5

Make and extend number and shape patterns that follow a rule.

NEXT

5.OA.B.3

Make two patterns from rules, pair them up and graph the pairs.

6 Helping at home

Take turns making patterns out loud: start at 3, add 5. The other person says the next three numbers and names the rule.