

Grade 4 · Number and Shape Patterns · Worksheet

Common Core 4.OA.C.5 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

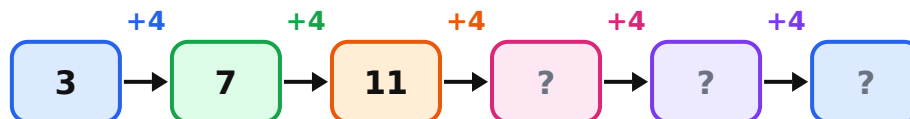
These 22 problems practice number and shape patterns from standard 4.OA.C.5. You will make patterns from rules, find the rule for a pattern, and describe features such as odd or even terms and repeating digits.

The last six problems are word problems about reading, saving, cans, video views, and road trips. Write each pattern in a list so you can check every step.

Grade 4 Common Core: 4.OA.C.5

Problem 1: Add 4 from 3

The rule is "start at 3, add 4." Write the first 6 terms. The chain shows the first three.



Fill in the missing terms.

Problem 2: Subtract 5 from 50

The rule is "start at 50, subtract 5." Write the first 6 terms.

Problem 3: Doubling pattern

The rule is "start at 1, multiply by 2." Write the first 7 terms.

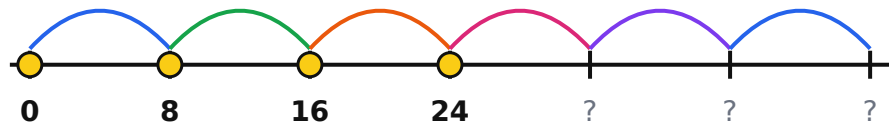
Problem 4: Find the rule

Look at the pattern 8,14,20,26. Write the rule, then write the next 3 terms.

Problem 5: Hops of equal size

The number line shows a pattern with equal hops. Write the rule and the three missing

numbers.



Equal hops on a number line.

Problem 6: Odd and even terms

The rule is "start at 1, add 3." Write the first 8 terms. Which terms are even? What do you notice about the odd and even terms?

Problem 7: Multiples of 5

The rule is "start at 0, add 5." Write the first 9 terms. What do you notice about the ones digits?

Problem 8: Add 10 from 7

The rule is "start at 7, add 10." Write the first 6 terms. What stays the same in every term?

Problem 9: Toothpick squares

Squares are built in a row with toothpicks. Write the rule for the number of toothpicks. How many toothpicks are in Figure 5?

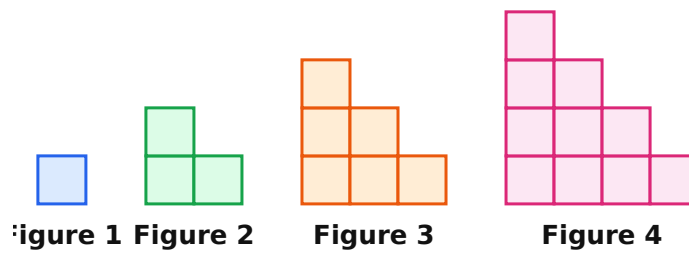


Figure 1 Figure 2 Figure 3

Figures 1, 2, and 3.

Problem 10: Block staircases

The staircases are built from blocks. Count the blocks in each figure. By how much does the number of blocks grow from one figure to the next? How many blocks are in Figure 5?



Staircase Figures 1 to 4.

Problem 11: Complete the table

The table shows the rule "start at 2, add 6." Fill in the missing terms. Is every term even or odd?

Term number	1	2	3	4	5
Term	2	8	14	?	?

Terms of the pattern.

Problem 12: Match the rule

Which pattern follows the rule "start at 4, add 6"?

- A. 4,10,16,22
- B. 4,10,15,20
- C. 4,8,12,16

Problem 13: Find the mistake

Jamal wrote this pattern for the rule "start at 5, add 7": 5,12,19,25,33. Find his mistake and write the correct first 6 terms.

Problem 14: Add 25

The rule is "start at 0, add 25." Write the first 9 terms. What is the 7th term? What do you notice about the last two digits of the terms?

Problem 15: Multiply by 3

The rule is "start at 2, multiply by 3." Write the first 5 terms. Are the terms even or odd?

Problem 16: Two patterns

Pattern A starts at 1 and adds 2. Pattern B starts at 2 and adds 2. Write the first 6 terms of each. Compare them. Do the terms of A and B ever match?

Problem 17: Shaded numbers

The shaded numbers on the hundred chart follow a rule. Write the rule. What is true about every shaded number?

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

Shaded numbers on a hundred chart.

Problem 18: Pages each day

Maya reads 12 pages on Monday. Each day after that she reads 4 more pages than the day before. How many pages does she read on the 6th day? On which day does she read 40 pages?

Problem 19: Saving for cleats

Liam has \$15 in the first week of baseball season. He adds \$10 each week. List his savings for weeks 1 through 6. Will he ever have exactly \$100? Explain.

Problem 20: Stacked cans

At the farmers market, Sofia stacks cans of peaches. Row 1 has 2 cans. Each next row has 2 more cans than the row above. How many cans are in row 8? How many cans are there in all 8 rows?

Problem 21: Doubling views

Diego posts a video. It gets 5 views on day 1, and each day the number of views doubles. Write the number of views for days 1 through 6. On which day does the video first have more than 100 views?

Problem 22: Road trip miles

Aisha's family drives 55 miles every hour on a road trip. Write the total miles after each of the first 6 hours. After how many hours have they driven 330 miles? What do you notice about the ones digits?