

Table of Contents

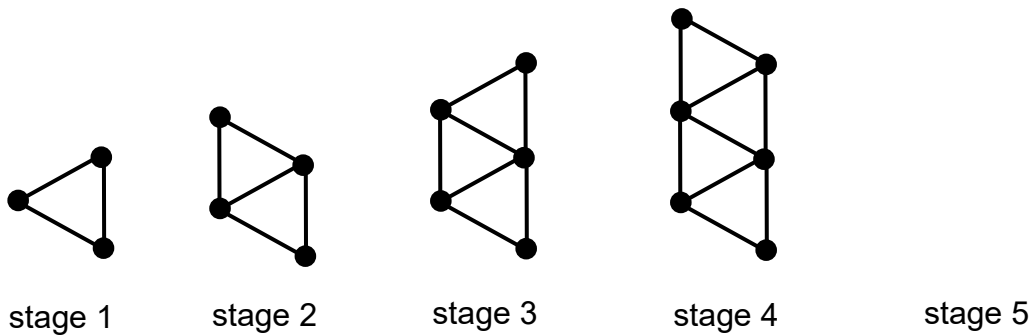
About the Author	iii
Introduction	iv
1. Pattern Predictor 1.....	1
2. Equality Explorer 1	3
3. Sequence Sleuth 1	4
4. Number Ninja 1.....	5
5. Function Finder 1.....	6
6. Pattern Predictor 2.....	7
7. Equality Explorer 2	9
8. Sequence Sleuth 2	10
9. Number Ninja 2.....	11
10. Function Finder 2.....	12
11. Pattern Predictor 3.....	13
12. Equality Explorer 3	15
13. Sequence Sleuth 3	16
14. Number Ninja 3.....	17
15. Function Finder 3.....	18
16. Pattern Predictor 4.....	19
17. Equality Explorer 4	21
18. Sequence Sleuth 4	22
19. Number Ninja 4.....	23
20. Function Finder 4.....	24
21. Pattern Predictor 5.....	25
22. Equality Explorer 5	27
23. Sequence Sleuth 5	28
24. Number Ninja 5.....	29
25. Function Finder 5.....	30
26. Pattern Predictor 6.....	31
27. Equality Explorer 6	33
28. Sequence Sleuth 6	34
29. Number Ninja 6.....	35
30. Function Finder 6.....	36
31. Pattern Predictor 7.....	37
32. Equality Explorer 7	39
33. Sequence Sleuth 7	40
34. Number Ninja 7.....	41
35. Function Finder 7.....	42
36. Pattern Predictor 8.....	43
37. Equality Explorer 8	45
38. Sequence Sleuth 8	46
39. Number Ninja 8.....	47
40. Function Finder 8.....	48
Hints	49
Solutions	56
Sample	84

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16. Pattern Predictor 4

The shapes below are made with toothpicks and gumdrops. For example, stage 2 has 5 toothpicks and 4 gumdrops.

- Look at the pattern and then draw stage 5. For later stages, make a drawing if it helps you answer the questions.



- How many toothpicks are there at stage 5?
- How many gumdrops are there at stage 5?

- How many toothpicks and gumdrops are there at stage 6?

- toothpicks: _____
- gumdrops: _____

- Complete the table to show the number of toothpicks and gumdrops for stages 1 through 8.

stage	1	2	3	4	5	6	7	8
number of toothpicks		5						
number of gumdrops		4						

- How many toothpicks and gumdrops are there at stage 12?

- toothpicks: _____
- gumdrops: _____

2. Equality Explorer 1

Each 2D shape represents a different whole number. Use the equations to find their value.

1.  +  = 18

 + 7 = 20

 = ___  = ___

2.  +  = 19

 +  +  = 24

 = ___  = ___

3.  +  = 



 + 7 = 19

 = ___  = ___

4.  +  + 15 = 25

 +  +  = 11

 = ___  = ___




5.  + 10 +  = 24

 +  = 9

 +  = 20

 = ___  = ___  = ___

6.  +  +  = 29

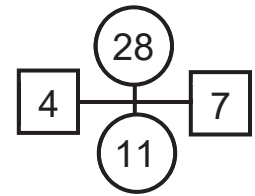
 +  +  = 34

 + 13 = 28

 = ___  = ___  = ___

14. Number Ninja 3

The top circle's number equals the product of the numbers in the squares: $28 = 4 \times 7$. The bottom circle's number equals the sum of the numbers in the squares: $11 = 4 + 7$.

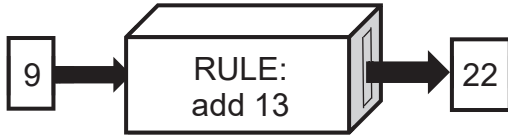


Fill in all missing numbers. When both squares are empty, put the larger of the two missing numbers in the right square.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

30. Function Finder 6

1. The function machine adds 13. So when you input 9, the output is 22. Use the rule to complete the table.



in	4	9	16	21		54
out	17	22	29		45	

2. Complete the table and state the function machine rule.

a. RULE: _____

in	14	21	29	36		74
out	24	31	39		52	

b. RULE: _____

in	6	13	18	25		57
out	28	35	40		64	

- 3a. Complete the table.

Spencer's age	5	11	23	35		66
Amanda's age	13	19	31		52	

b. Spencer is 16. How old is Amanda?

c. Amanda is 47. How old is Spencer?

- 4a. Complete the table.

cost to make cake (\$)	6	9	15	22	28	
selling price of cake (\$)	11	14	20	27		41

b. It costs \$25 to make the cake.
What is the selling price of the cake?

c. The selling price of the cake is \$17.
How much does it cost to make the cake?

- 5a. Complete the table.

Sammy's situps	20	32	45	57	70	
Sammy's pushups	5	17	30	42		88

b. Sammy does 27 situps. How many pushups does he do?

c. Sammy does 50 pushups.
How many situps does he do?