NUMBERCROSS

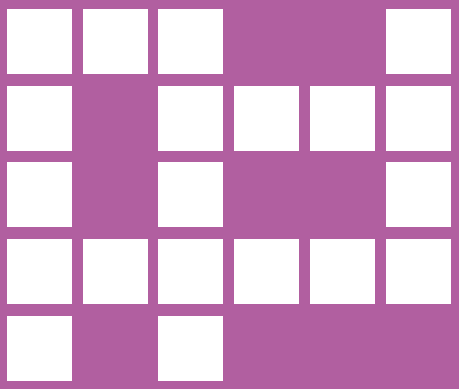
DIFFICULTY LEVEL:

★–★★★★★

In a **Numbercross** puzzle, the goal is to fill all of the blanks in a grid with digits so that every number that is written in words appears in the grid.

Numbers in the grid can be read either left-to-right or top-to-bottom.

Two hundred two
Two thousand five hundred
Five thousand five
Twenty-five thousand twenty
Twenty-five thousand two hundred
Two hundred thousand, two hundred fifty



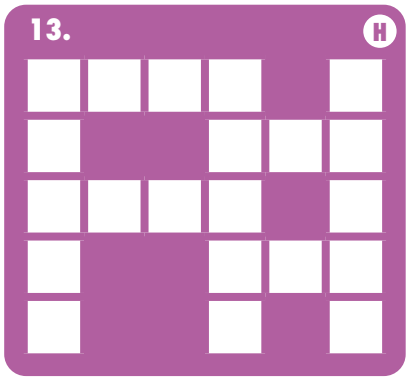
First, we write each number using digits.

202
2,500
5,005
25,020
25,200
200,250

We can arrange these numbers as shown so that every number appears in the grid.

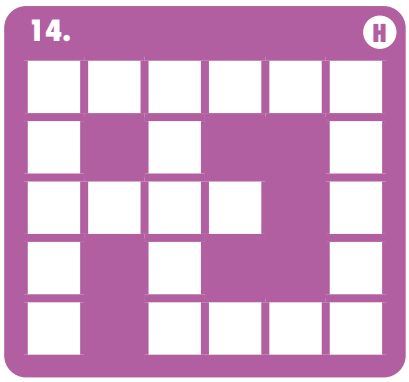
2	0	2			2
5		5	0	0	5
0		2			0
2	0	0	2	5	0
0		0			

13. H



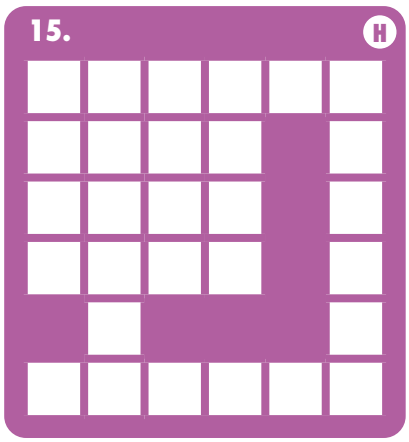
One hundred fifty-three
Three hundred fifty-one
One thousand five
Three thousand fifty
Ten thousand, three hundred fifty
Fifty-one thousand, five hundred thirty
Fifty-three thousand thirteen

14. H



Three thousand twenty
Three thousand, two hundred
Twenty thousand, two hundred three
Twenty thousand, three hundred
Thirty thousand, two hundred
Two hundred two thousand three

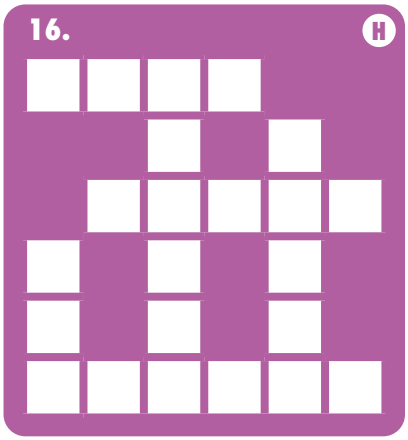
15. H



One thousand, two hundred thirty-four
Two thousand
Three thousand, eight hundred
Four thousand
Six thousand
Seven thousand
One hundred fifty-six thousand, seven hundred nine
Five hundred eight thousand nine
Nine hundred thousand ninety-nine
Nine hundred ninety-nine thousand nine

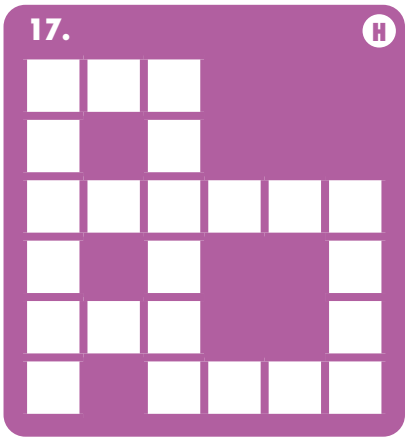
H Hints on page 164

16. (H)



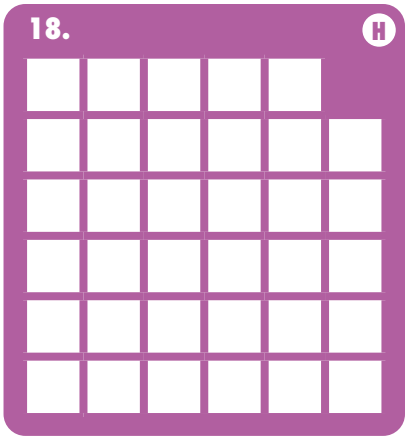
Seven hundred six
Six thousand seventy
Seventy thousand sixty
Seventy thousand, six hundred
Six hundred thousand seven
Seven hundred thousand, six hundred

17. (H)



One hundred five
Five hundred five
One thousand one
Five thousand one
One hundred five thousand fifty-one
Five hundred one thousand fifteen
Five hundred one thousand fifty-one

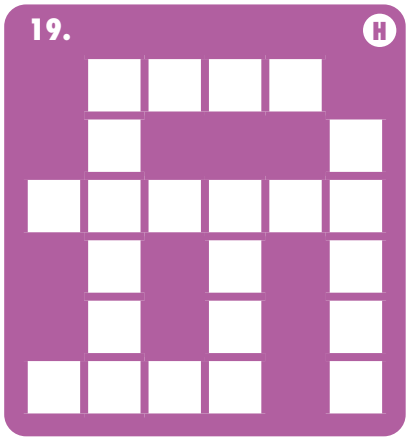
18. (H)



Eleven thousand, one hundred ten
Eleven thousand, one hundred eleven
One hundred thousand
One hundred thousand thirty
One hundred thousand thirty-one
One hundred thousand five hundred
One hundred thousand five hundred one
One hundred nine thousand
One hundred nine thousand one
One hundred eleven thousand, one hundred eleven
One hundred seventy thousand
One hundred seventy thousand one

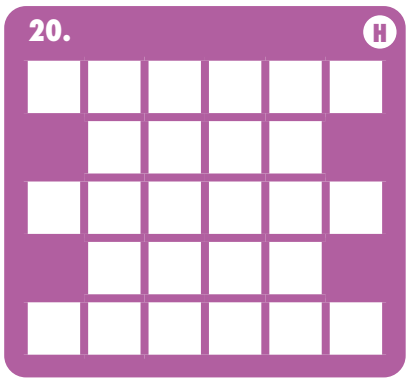
(H) Hints on page 164

19. H



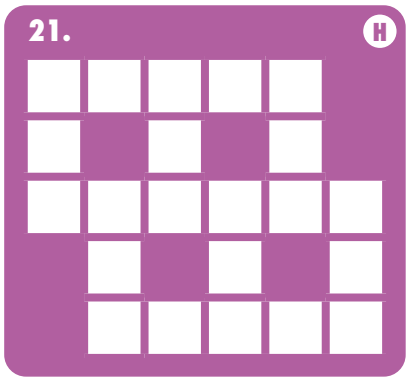
One thousand ninety
One thousand, nine hundred
Nine thousand ten
Ninety thousand one
Nine hundred thousand, one hundred ten
Nine hundred ten thousand, one hundred ten

20. H



Four thousand four
Four thousand forty
Twenty-four thousand two
Twenty-four thousand, two hundred forty-four
Forty thousand forty
Forty thousand, two hundred four
Two hundred twenty-two thousand
Two hundred twenty-four thousand, four hundred twenty
Two hundred forty-four thousand twenty

21. H



Three hundred five
Three hundred seven
Five hundred three
Five hundred five
Seven hundred three
Seven hundred five
Fifty thousand, five hundred three
Fifty thousand, seven hundred three
Five hundred seventy-three thousand, three hundred seventy-five

H Hints on page 164

Page 131

13.

1	0	0	5		5
0			3	5	1
3	0	5	0		5
5			1	5	3
0			3		0

14.

2	0	2	0	0	3
0		0			0
3	0	2	0		2
0		0			0
0		3	2	0	0

15.

1	5	6	7	0	9
2	0	0	0		0
3	8	0	0		0
4	0	0	0		0
	0				9
9	9	9	0	0	9

Page 132

16.

6	0	7	0		
		0		7	
	7	0	6	0	0
7		6		0	
0		0		6	
6	0	0	0	0	7

17.

1	0	5			
0		0			
5	0	1	0	1	5
0		0			0
5	0	5			0
1		1	0	0	1

18.

1	1	1	1	1	
1	7	0	0	0	1
1	0	9	0	0	1
1	0	0	5	0	1
1	0	0	0	3	1
1	0	0	0	0	0

Page 133

19.

	9	0	1	0	
	1				9
9	0	0	1	1	0
	1		9		0
	1		0		0
1	0	9	0		1

20.

2	2	4	4	2	0
	4	0	0	4	
2	2	2	0	0	0
	4	0	4	0	
2	4	4	0	2	0

21.

5	0	7	0	3	
0		0		0	
5	7	3	3	7	5
	0		0		0
	5	0	5	0	3

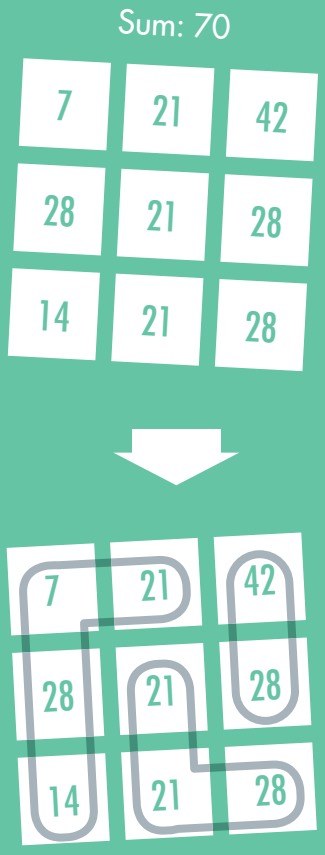
SUM BLOBS

DIFFICULTY LEVEL:

★–★★★★★

In a **Sum Blob** puzzle, the goal is to circle "blobs" whose sum is a given target number.

Every square in a blob must share at least one edge with another square in the blob. Blobs may not overlap. The goal is to use every number in the grid in a blob.



The sums in the three blobs are 14+28+7+21=70, 21+21+28=70, and 42+28=70.

34. Sum: 300 (H)

45	100	100	100
35	100	25	35
100	100	100	60

35. Sum: 30 (H)

15	9	15	15
7	4	6	15
4	7	8	15

36. Sum: 19 (H)

12	4	9	10
7	7	8	8
8	11	8	3

37. Sum: 20 (H)

1	1	9	6
1	6	6	8
1	7	8	6

38. Sum: 240 (H)

5	20	3	6
8	200	200	2
7	8	1	20

39. Sum: 40 (H)

6	17	6	17
6	6	11	11
17	6	6	11

(H) Hints on pages 154-155

40. Sum: 13 (H)

1	3	1	9
6	1	2	1
1	5	1	7
8	1	4	1

41. Sum: 12 (H)

2	3	5	5
1	2	5	5
6	6	1	2
6	6	2	3

42. Sum: 90 (H)

10	20	21	10
20	20	40	40
20	19	40	40
10	20	20	10

43. Sum: 23 (H)

10	10	2	1
10	10	3	10
6	5	4	10
7	8	9	10

44. Sum: 24 (H)

12	7	5	12
5	6	6	7
12	7	5	7
5	6	12	6

45. Sum: 14 (H)

1	3	3	4
5	3	2	4
5	5	2	4
1	5	5	4

(H) Hints on pages 154-155

46. Sum: 36 (H)

9	3	9	3
9	27	9	9
9	9	3	9
27	9	27	9

47. Sum: 18 (H)

6	8	4	4
6	4	2	1
1	2	2	6
8	8	4	6

48. Sum: 14 (H)

1	1	1	1
9	10	1	1
1	12	13	1
1	1	1	1

49. Sum: 26 (H)

8	4	7	5
4	6	8	6
8	5	7	9
5	7	9	6

50. Sum: 13 (H)

3	10	1	2
10	1	10	2
3	10	1	10
2	1	10	2

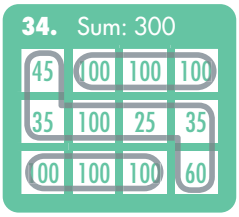
51. Sum: 40 (H)

4	3	15	16
2	4	12	15
15	14	7	6
17	15	8	7

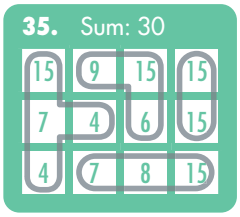
(H) Hints on pages 154-155

Page 25

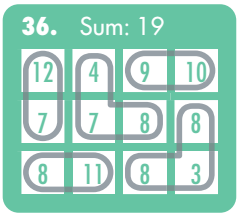
34. Sum: 300



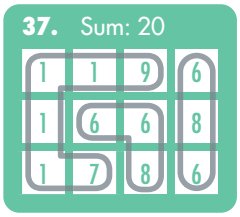
35. Sum: 30



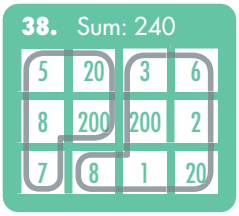
36. Sum: 19



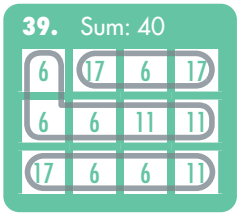
37. Sum: 20



38. Sum: 240

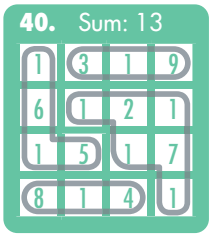


39. Sum: 40

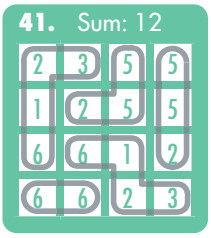


Page 26

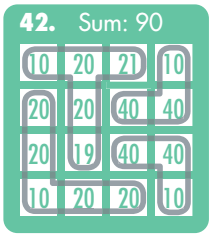
40. Sum: 13



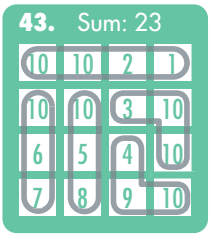
41. Sum: 12



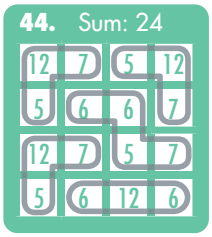
42. Sum: 90



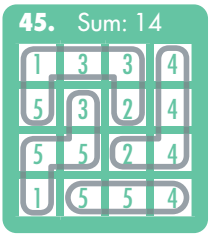
43. Sum: 23



44. Sum: 24

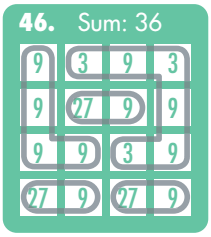


45. Sum: 14

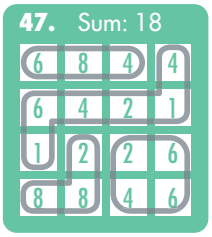


Page 27

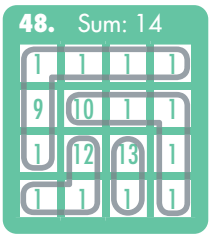
46. Sum: 36



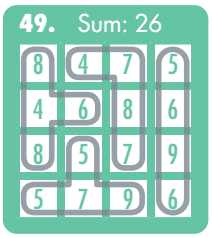
47. Sum: 18



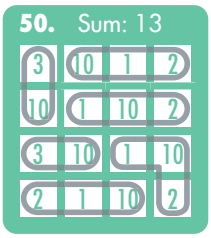
48. Sum: 14



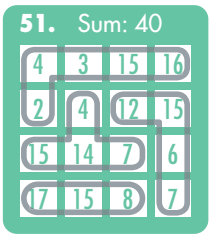
49. Sum: 26



50. Sum: 13



51. Sum: 40



FILLOMINOES

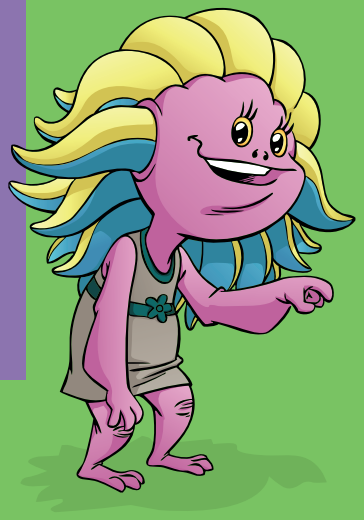
DIFFICULTY LEVEL:

★–★★★★★

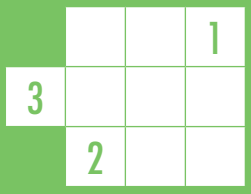
In a **Fillomino** puzzle, the goal is to fill squares in a grid to create polyominoes (shapes made of connected squares) with the given areas.

Every square in the grid must be filled with a number that gives the area of the polyomino it is a part of.

In each puzzle, there must be exactly one polyomino of each of the given areas.

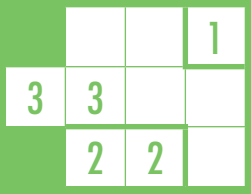


Areas: 1, 2, 3, 4

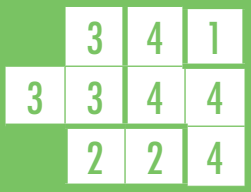


The square to the right of the given 3 must be part of the 3-omino, so we place a 3 there.

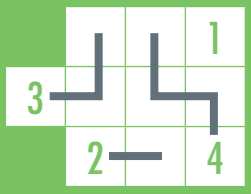
Then, there is only one way to complete the 2-omino.



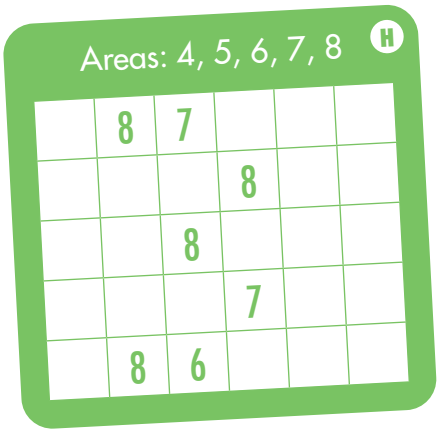
Finally, there is only one way to complete the 3-omino while still creating a 4-omino.



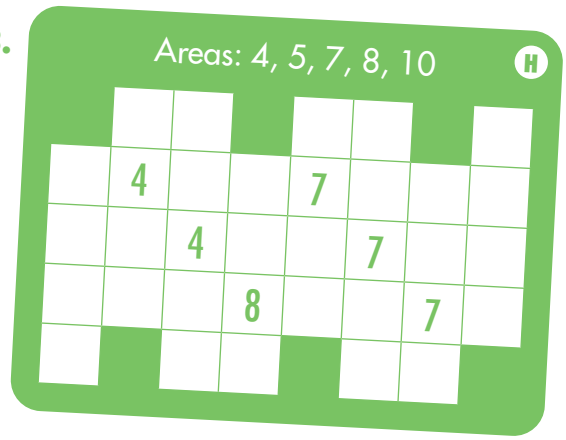
Instead of writing a number in every square, we could also draw lines connecting all the squares of each polyomino.



27. Areas: 4, 5, 6, 7, 8 (H)

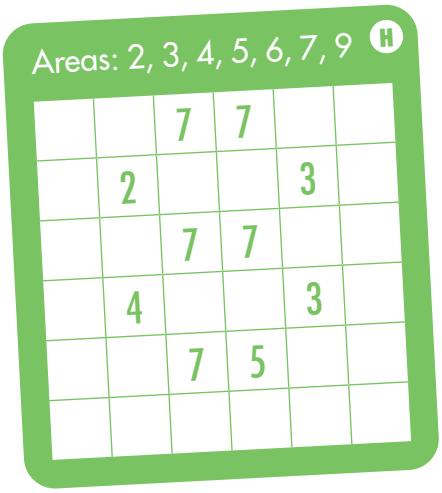


28. Areas: 4, 5, 7, 8, 10 (H)

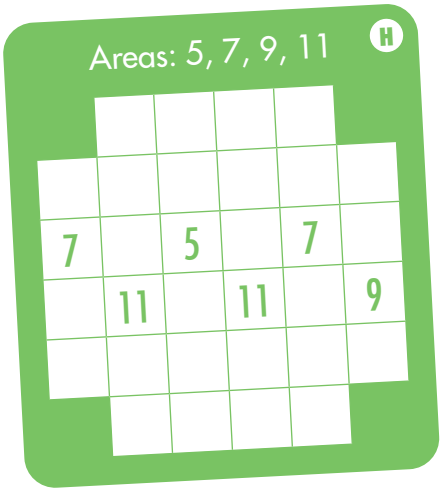


29. Areas: 3, 4, 7, 8, 9 (H)

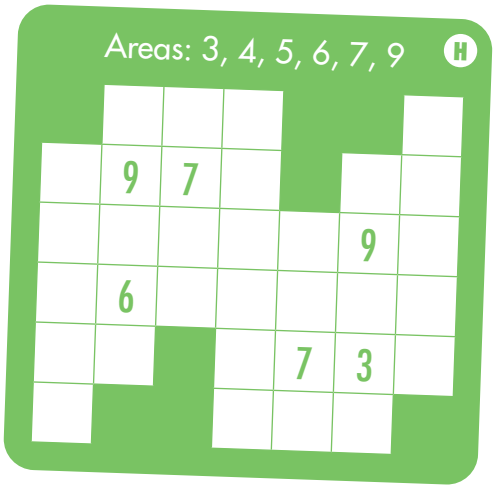
30. Areas: 2, 3, 4, 5, 6, 7, 9 (H)



31. Areas: 5, 7, 9, 11 (H)

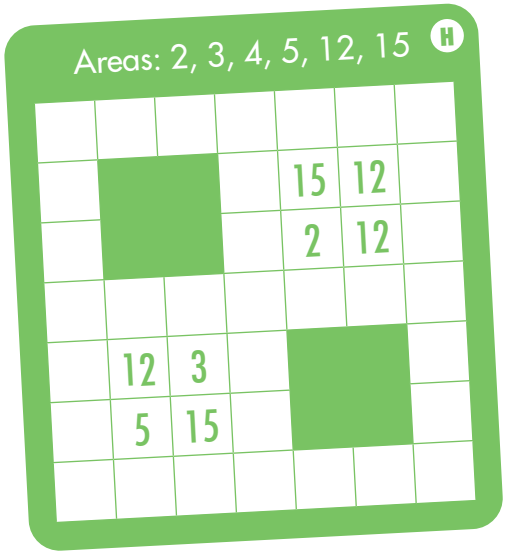


32. Areas: 3, 4, 5, 6, 7, 9 (H)

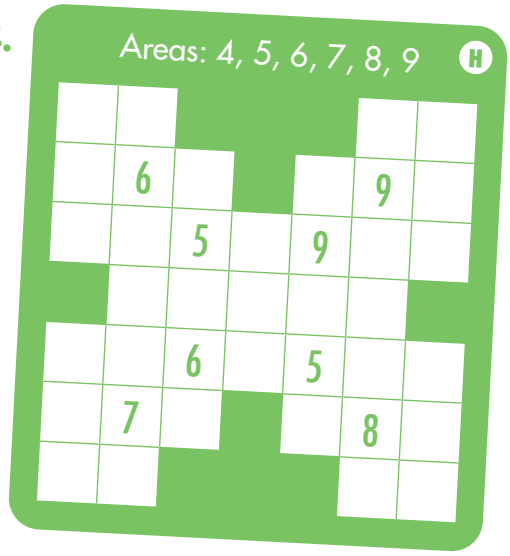


(H) Hints on pages 170-171

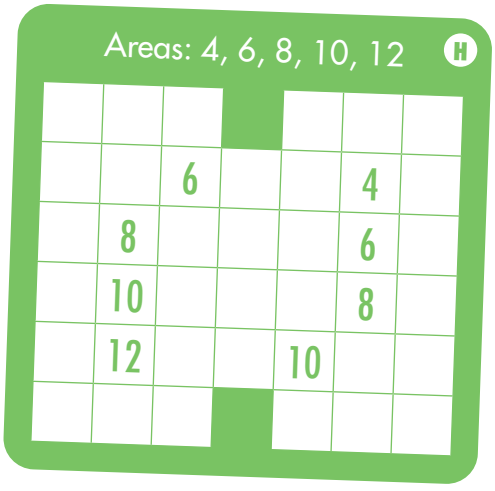
33. Areas: 2, 3, 4, 5, 12, 15 (H)



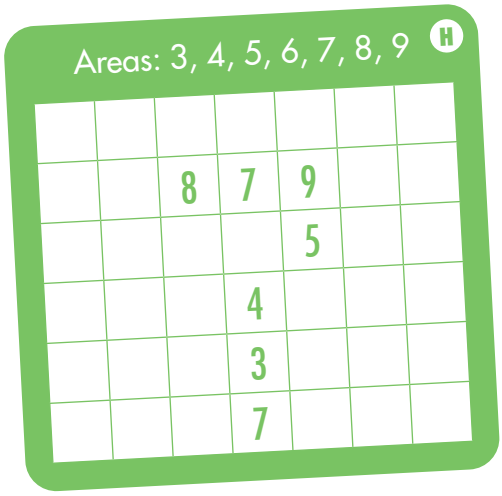
34. Areas: 4, 5, 6, 7, 8, 9 (H)



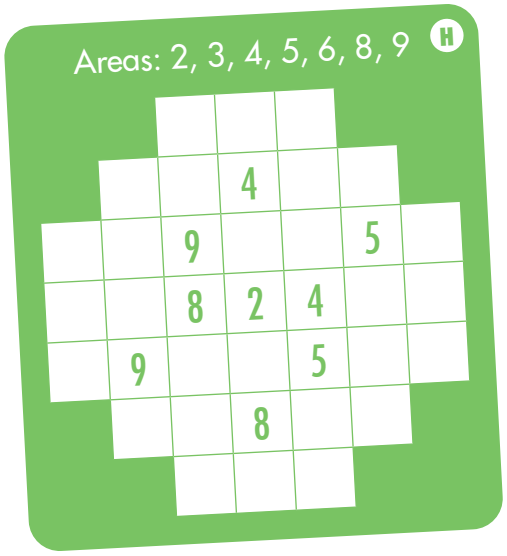
35. Areas: 4, 6, 8, 10, 12 (H)



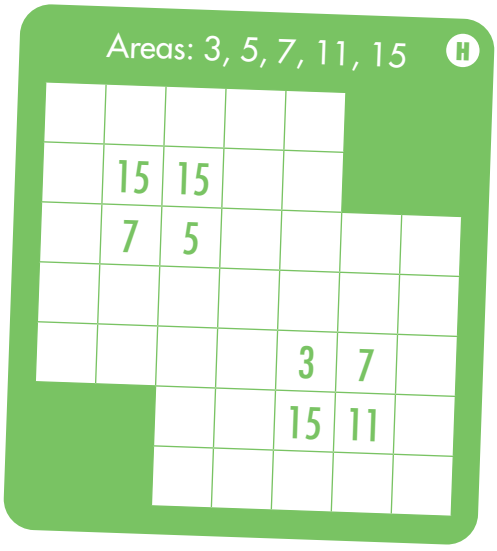
36. Areas: 3, 4, 5, 6, 7, 8, 9 (H)



37. Areas: 2, 3, 4, 5, 6, 8, 9 (H)

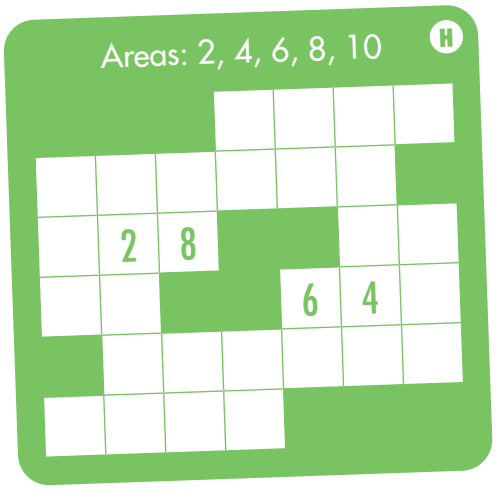


38. Areas: 3, 5, 7, 11, 15 (H)

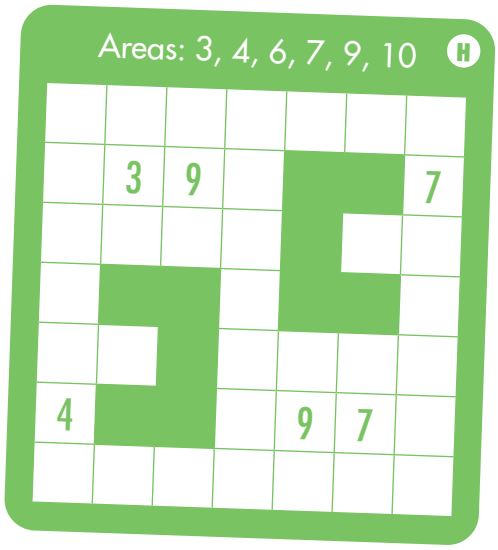


(H) Hints on pages 170-171

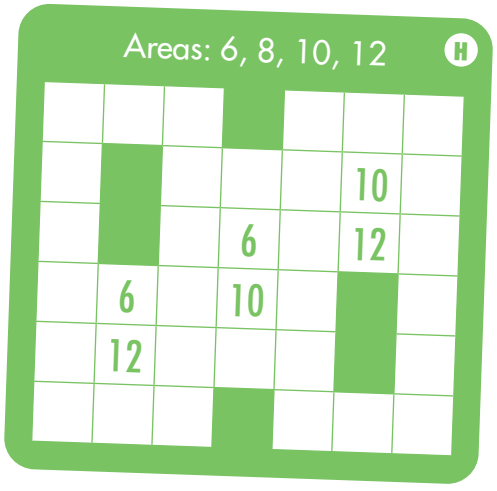
39. Areas: 2, 4, 6, 8, 10 (H)



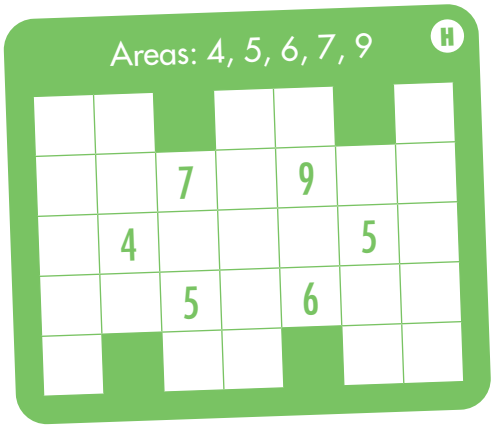
40. Areas: 3, 4, 6, 7, 9, 10 (H)



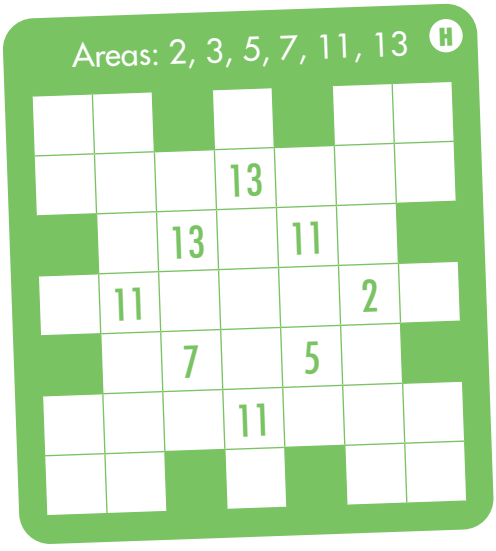
41. Areas: 6, 8, 10, 12 (H)



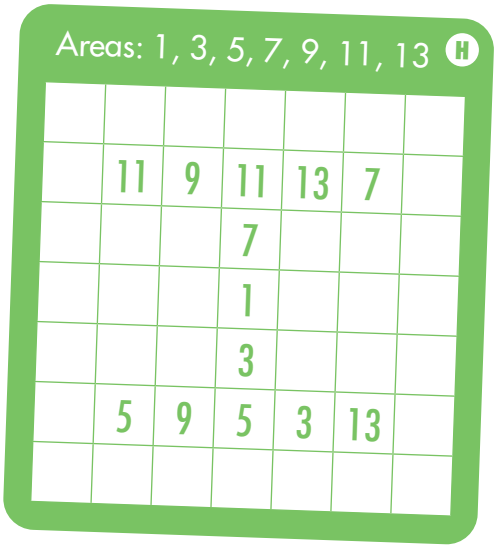
42. Areas: 4, 5, 6, 7, 9 (H)



43. Areas: 2, 3, 5, 7, 11, 13 (H)



44. Areas: 1, 3, 5, 7, 9, 11, 13 (H)



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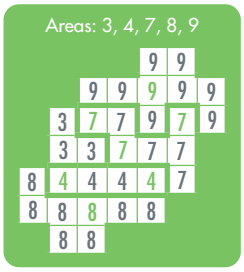
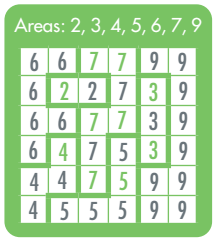
27. Areas: 4, 5, 6, 7, 8

28. Areas: 4, 5, 7, 8, 10

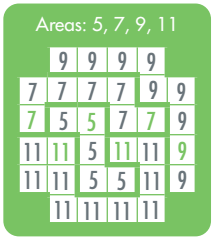
29. Areas: 3, 4, 7, 8, 9



30. Areas: 2, 3, 4, 5, 6, 7, 9



31. Areas: 5, 7, 9, 11



32. Areas: 3, 4, 5, 6, 7, 9

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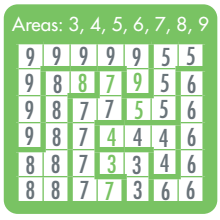
33. Areas: 2, 3, 4, 5, 12, 15

34. Areas: 4, 5, 6, 7, 8, 9

35. Areas: 4, 6, 8, 10, 12

36. Areas: 3, 4, 5, 6, 7, 8, 9



37. Areas: 2, 3, 4, 5, 6, 8, 9

38. Areas: 3, 5, 7, 11, 15

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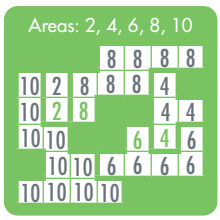
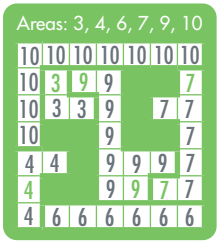
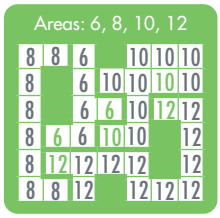
39. Areas: 2, 4, 6, 8, 10



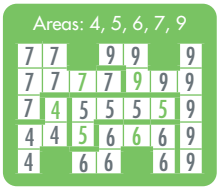
40. Areas: 3, 4, 6, 7, 9, 10



41. Areas: 6, 8, 10, 12



42. Areas: 4, 5, 6, 7, 9



43. Areas: 2, 3, 5, 7, 11, 13

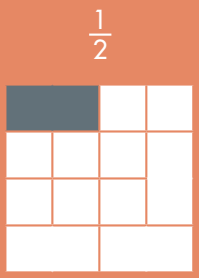
44. Areas: 1, 3, 5, 7, 9, 11, 13

ABSTRACT ART

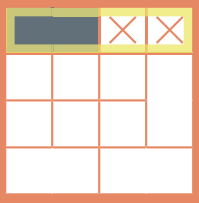
DIFFICULTY LEVEL:

★–★★★★★

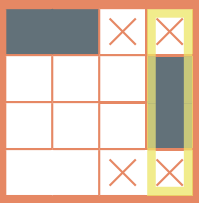
In an **Abstract Art** puzzle, the goal is to shade tiles so the fraction above the grid gives the fraction of each row and column that is shaded.



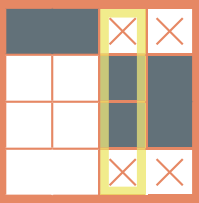
The top row is already $\frac{1}{2}$ shaded. So, we draw X's in the other squares in the top row to show they must be unshaded.



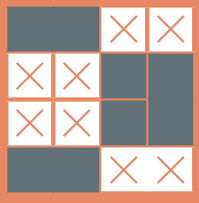
The only way to shade $\frac{1}{2}$ of the right column is by shading the 1-by-2 rectangle as shown. Then, we can mark the bottom-right rectangle with X's to show it is unshaded.



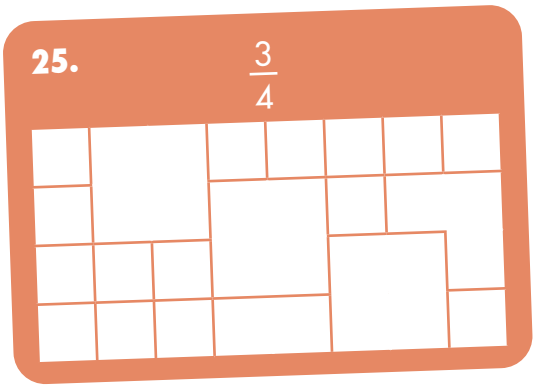
The third column is $\frac{1}{2}$ unshaded. So, we shade the remaining $\frac{1}{2}$ of this column.



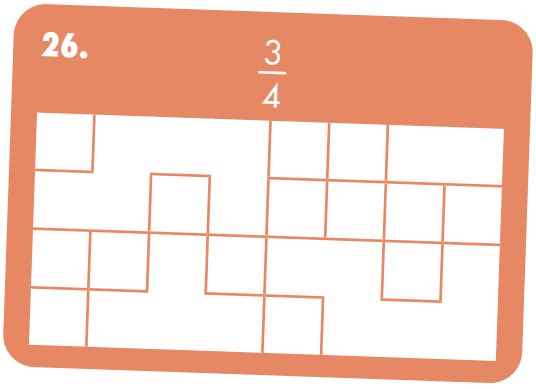
We complete the remaining rows as shown.



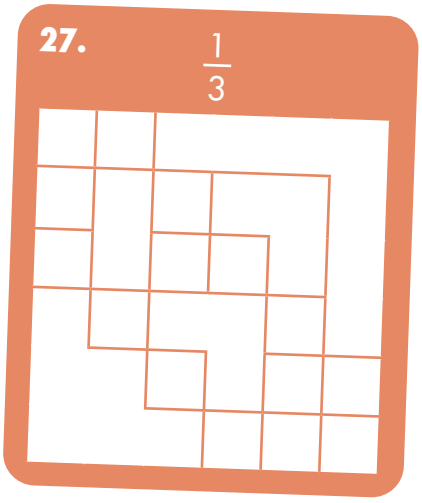
25. $\frac{3}{4}$



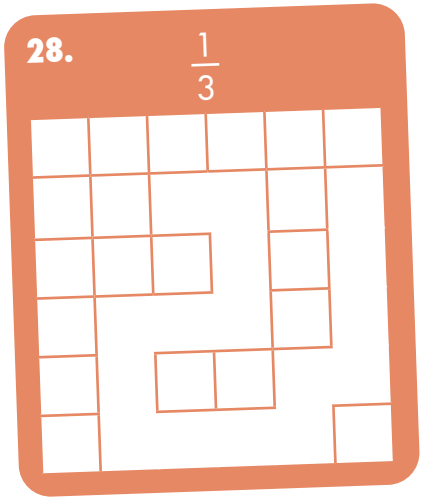
26. $\frac{3}{4}$



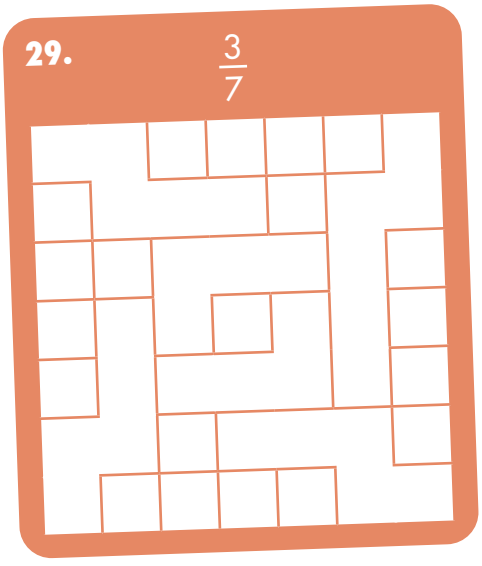
27. $\frac{1}{3}$



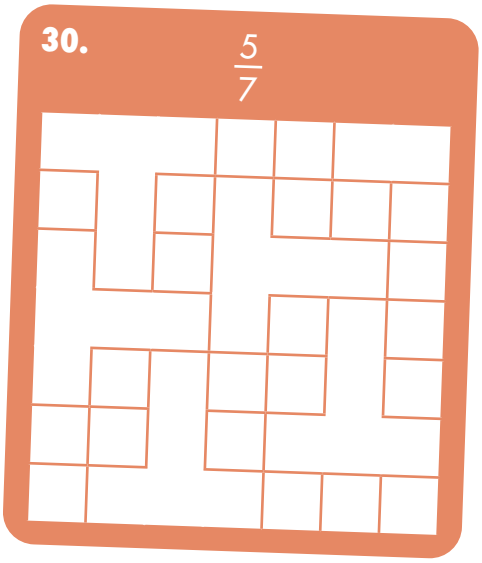
28. $\frac{1}{3}$

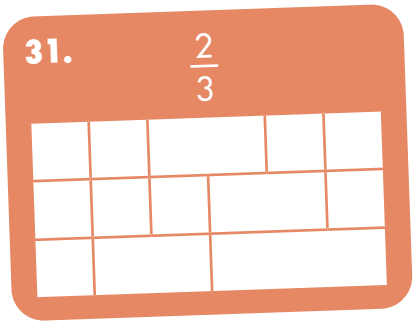


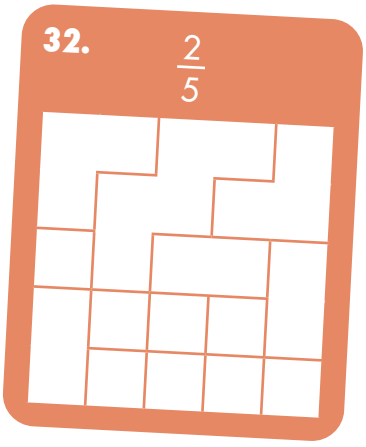
29. $\frac{3}{7}$

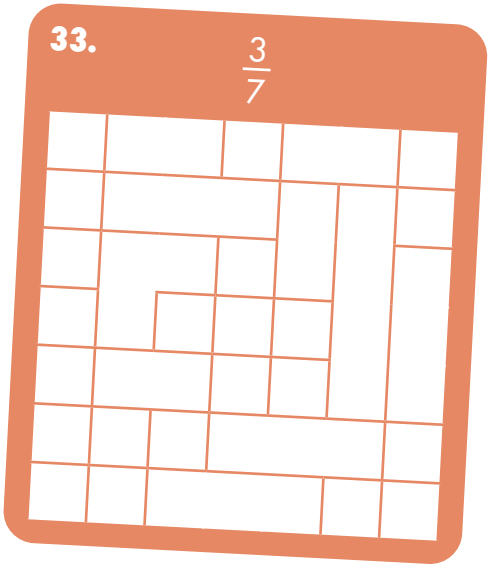


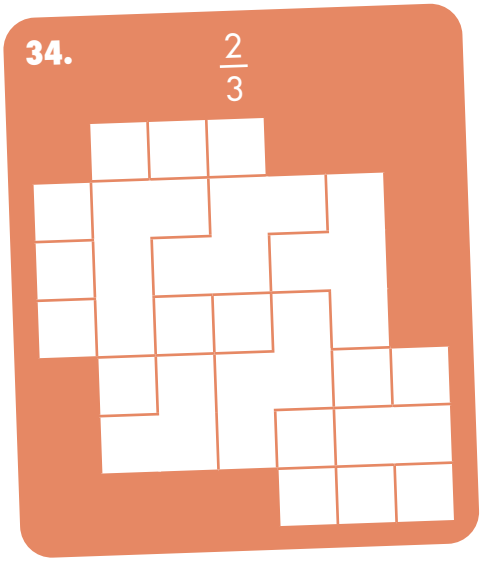
30. $\frac{5}{7}$

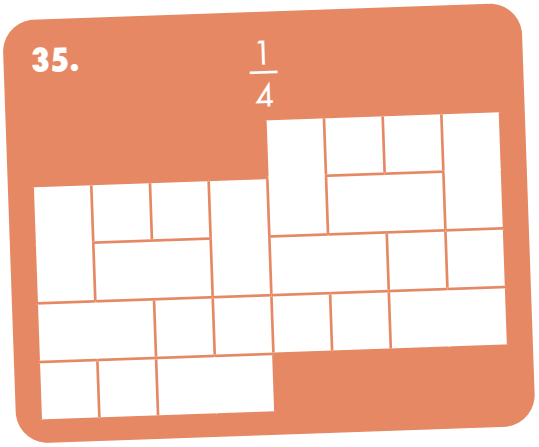


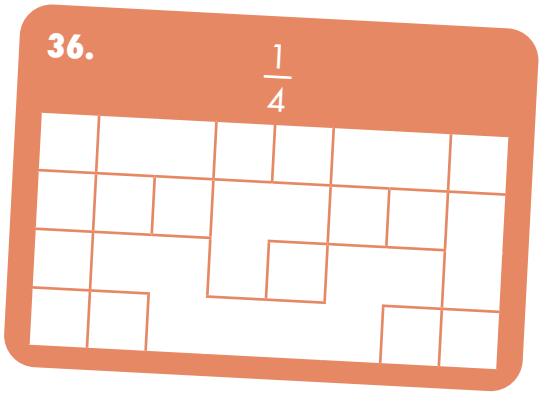

31.
2/3


32.
2/5

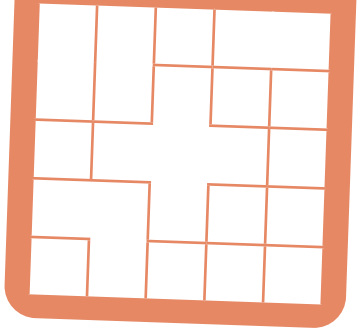

33.
3/7


34.
2/3

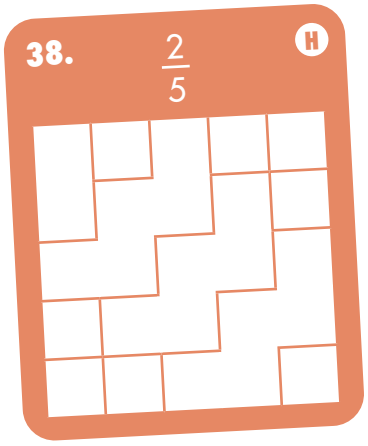

35.
1/4


36.
1/4

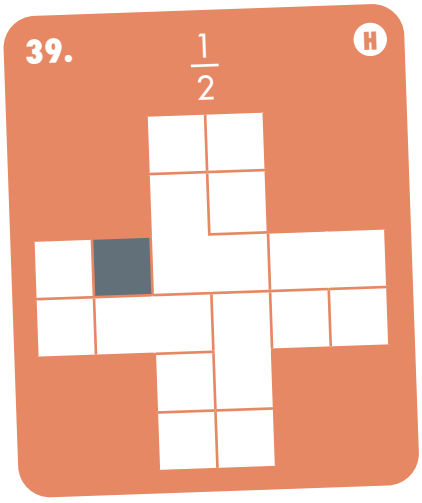
37. $\frac{3}{5}$ H



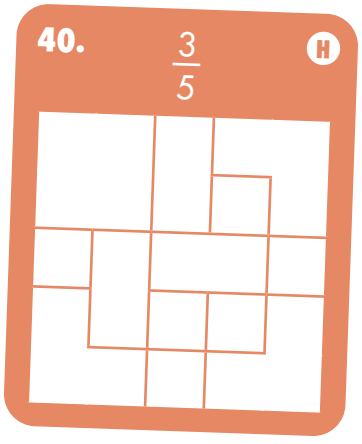
38. $\frac{2}{5}$ H



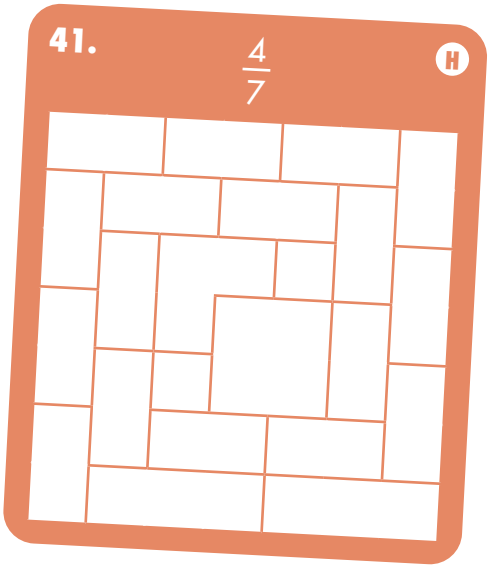
39. $\frac{1}{2}$ H



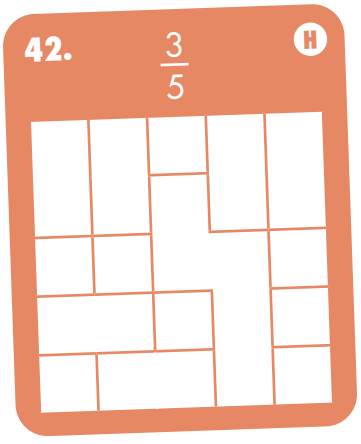
40. $\frac{3}{5}$ H



41. $\frac{4}{7}$ H



42. $\frac{3}{5}$ H



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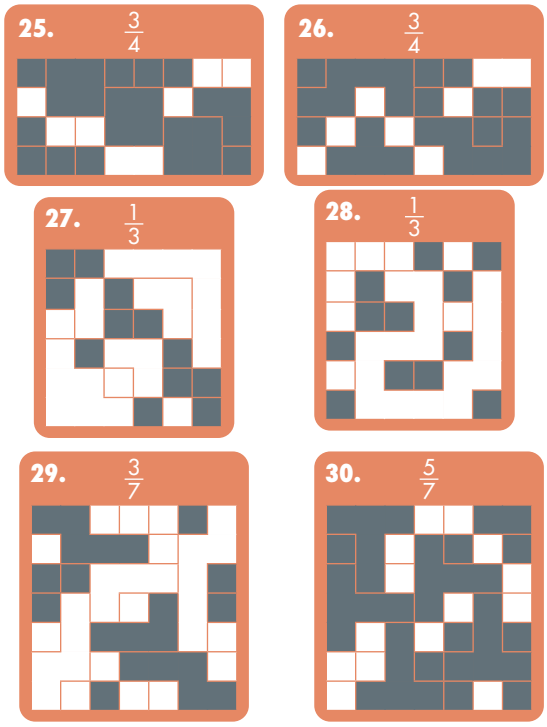

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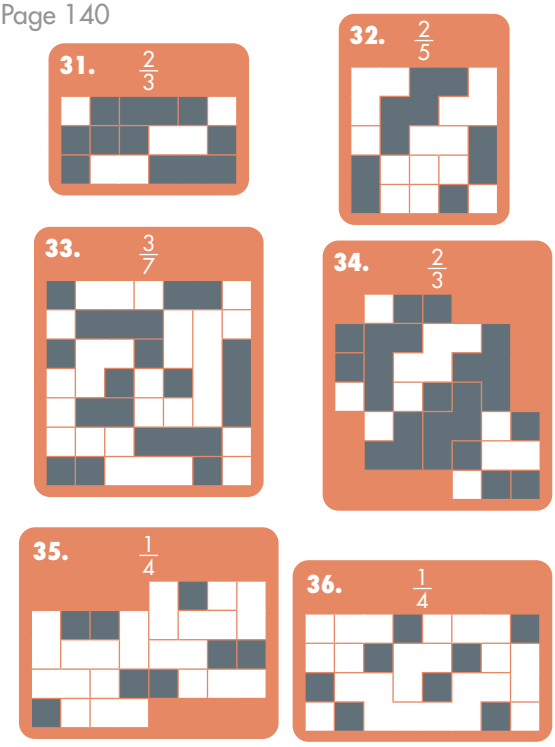

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