

Cross–number puzzle 1

	1	1	1						
1		2	3		4		5	6	
3		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					

Clues Across

- 1. Five thousand and thirty-one
- 4. One thousand, four hundred and twelve
- 7. Six thousand, four hundred and eighty-six
- 9. Twenty-four
- 10. Two hundred and ten
- 12. Three thousand, eight hundred and eleven
- 14. Forty-six
- 15. Four thousand, three hundred and fifty-two
- 16. Nineteen
- 17. One thousand, three hundred and eighty-one
- 18. Eight hundred and seventy-three
- 19. Eleven
- 22. Thirteen
- 23. Three thousand and seventy-one
- 24. Three hundred and forty-one
- 26. Three hundred and fifty-eight
- 29. Six hundred and fifty-two
- 30. Nine hundred and twenty-six
- 31. Seventeen

Clues Down

- 1. Five hundred and two
- 2. Three hundred and sixty
- 3. Fourteen
- 4. Sixteen
- 5. One thousand, two hundred and eighty-three
- 6. Two thousand, four hundred and fifteen
- 8. Eight thousand and sixty-three
- 11. One thousand and ninety-seven
- 12. Three thousand, four hundred and eleven
- 13. Twelve
- 14. Forty-one
- 16. Eighteen
- 20. One thousand and thirty-six
- 21. Six thousand and twelve
- 22. One hundred and thirteen
- 23. Three hundred and nine
- 25. Four hundred and fifty-nine
- 27. Fifty-one
- 28. Eighty-seven

Cross–number puzzle 2

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		

Clues Across

- 1. Four thousand, six hundred and twenty-eight
- 4. Twenty thousand, seven hundred and ninety-one
- 7. Nine thousand and forty-one
- 9. Sixty-seven
- 10. Five hundred and ten
- 12. One thousand and sixty-four
- 14. Fifty-two
- 15. Nine thousand, four hundred and twenty-six
- 16. Ninety-four
- 17. Two thousand, nine hundred and four
- 18. Eighty thousand and forty-seven
- 19. Twenty-nine
- 22. Sixty-eight thousand and seventy-one
- 23. Five thousand and two
- 24. Four hundred and ninety-seven
- 26. Six million, four hundred and twenty-six thousand, two hundred and three
- 29. Four hundred and sixty
- 30. Thirty
- 31. Five hundred and ninety

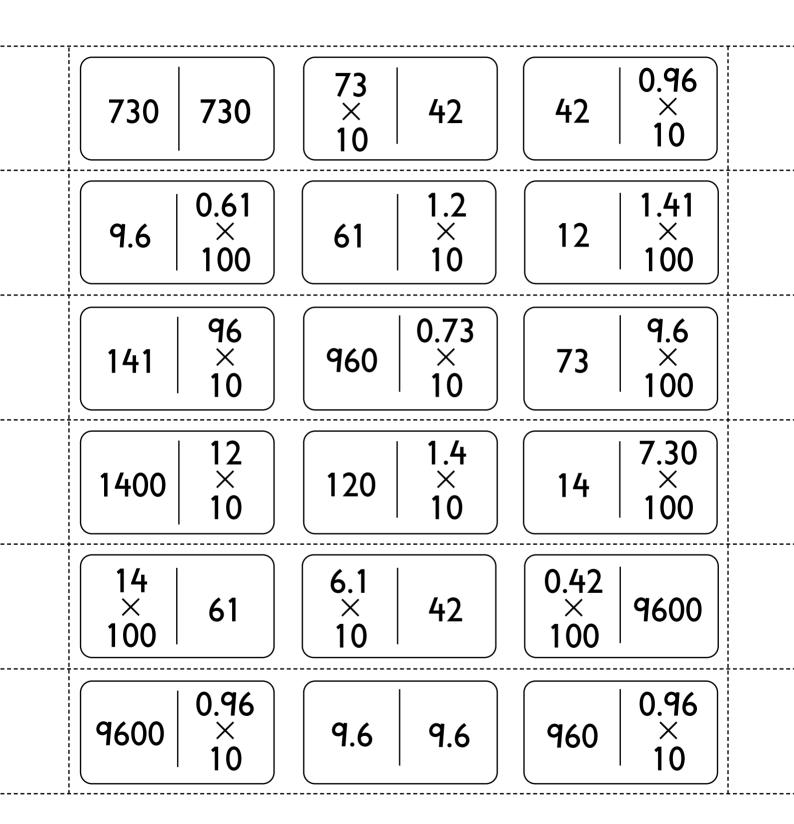
Clues Down

- 1. Four hundred and five
- 2. Two hundred and ninety
- 3. Eighty
- 4. Twenty-one
- 5. Seven thousand, six hundred and four
- 6. Ninety-seven thousand, six hundred and twenty-five
- 8. Four hundred and two thousand, nine hundred and seventy-eight
- 11. One thousand and forty
- 12. Nineteen thousand, four hundred and twenty-seven
- 13. Forty-six
- 14. Five hundred and twenty-four thousand, six hundred and twenty-six
- 16. Ninety-eight
- 20. Ninety-one thousand, four hundred and twenty-five
- 21. Sixty thousand, seven hundred and thirty
- 23. Five hundred and sixty-four
- 25. Nine hundred and nine
- 27. Forty-three
- 28. Twenty

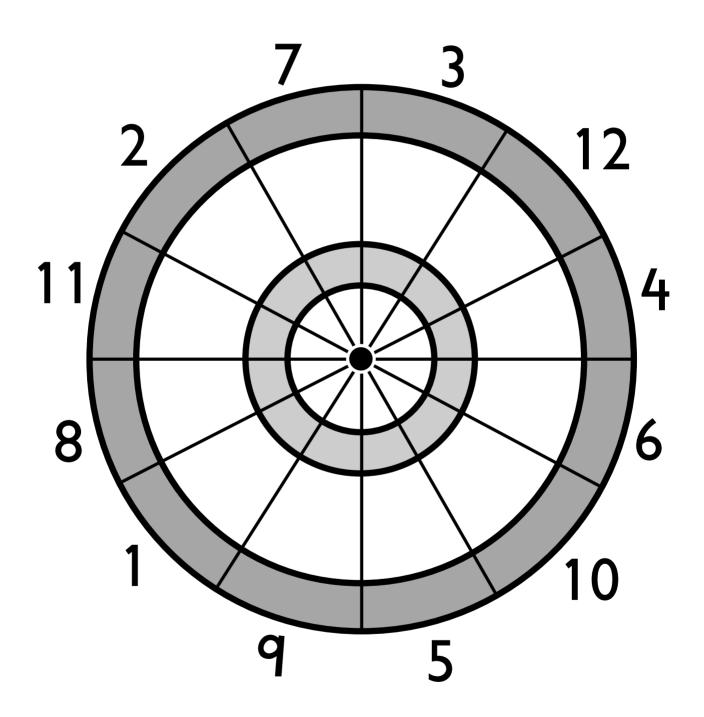
Numbers in words

-	one	11	eleven	30	thirty
2	two	12	twelve	40	forty
3	three	13	thirteen	50	fifty
4	four	14	fourteen	60	sixty
5	five	15	fifteen	70	seventy
6	six	16	sixteen	80	eighty
7	seven	17	seventeen	06	ninety
8	eight	18	eighteen	100	hundred
6	nine	19	nineteen	1 000	thousand
10	ten	20	twenty	1 000 000	million

Dominoes Enlarge to A3, copy onto card, laminate and cut into dominoes







Pass it on (addition and subtraction)

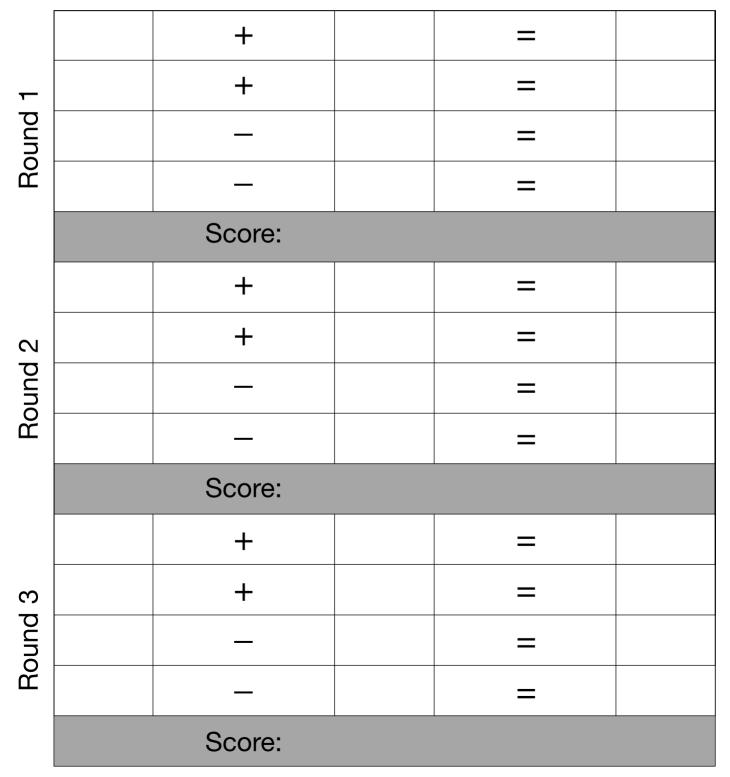
First player: put a number in the first box. Pass the paper clockwise to your neighbour.

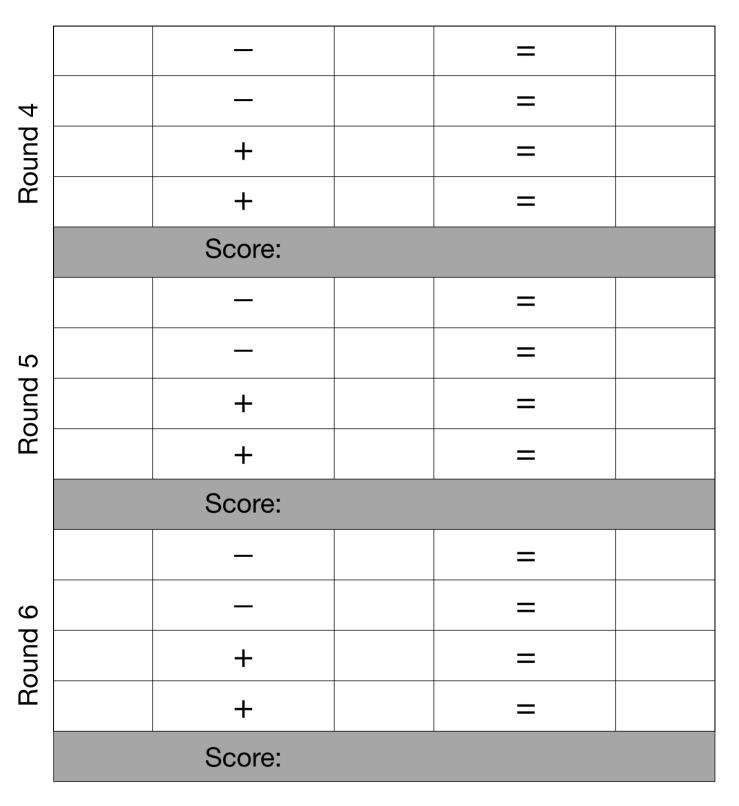
Second player: fill in the second box, then pass the paper on.

Third player: do the calculation and pass it to the first player.

The first player now has one minute to find the other three number sentences which correspond to the first sentence. At the end of the minute, the other players check the answers, and the first player gets 1 point for each correct answer.

For round 2, player 2 starts.





Pass it on (addition and subtraction)

Subtraction snake

25	32	10	45	22
28	40	11	33	16
24	36	20	41	29
30	21	42	26	23
31	15	44	18	34

Throw the dice twice and record the four numbers on a piece of paper.

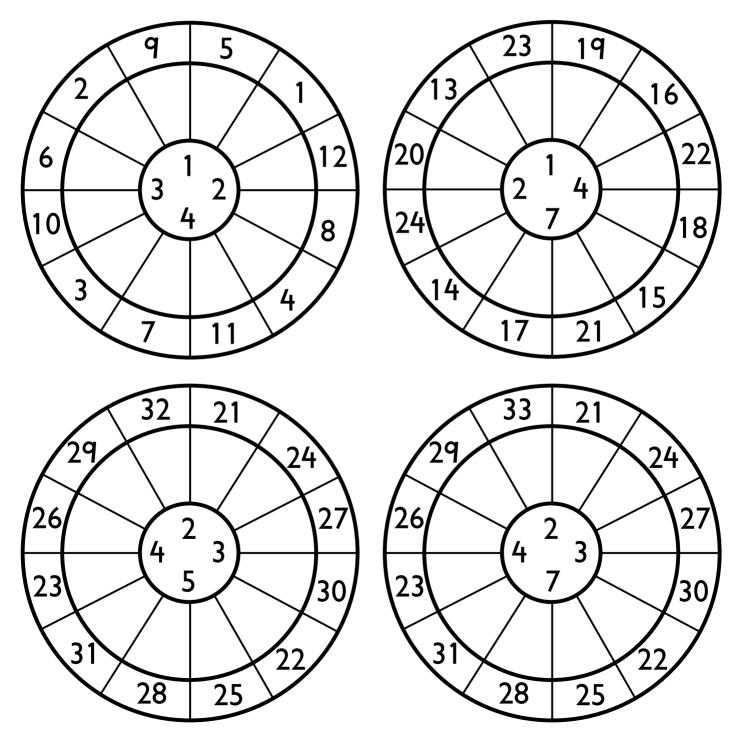
Use the numbers in any order to make a subtraction that will give one of the answers above.

Cover the answer with a counter.

The first person to get four in a line is the winner.

Making target numbers

Use the digits in the middle to make the target numbers around the edge. You can use any operation: $+, -, \times$, or \div . Write your expressions in the spaces. You do not have to use every digit each time, but you cannot use a digit more than once in each calculation. You can use digits to make two-digit numbers, eg 12.



Four in a line – expressions

7	18	41	52	31	49	12	42
28	13	3	58	33	53	19	30
1	40	29	14	38	26	9	51
50	15	59	2	56	20	43	32
23	10	45	27	16	44	25	5
39	55	4	48	34	60	11	57
17	35	64	21	63	6	54	61
8	46	24	62	37	47	22	36

Zeros and nines record sheet – thousands

0	0	_	9	9	=	
 0	0	—	 9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	—	9	9	=	
0	0	—	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	—	9	9	=	
0	0	—	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	
0	0	_	9	9	=	

Zeros and nines record sheet – hundreds

0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	—	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	_	9	=	
0	—	9	=	
0	—	9	=	
0		9	=	
0		9	=	
0		9	=	
0		9	 =	

Pass it on (multiplication and division)

First player: put a number in the first box. Pass the paper clockwise to your neighbour.

Second player: fill in the second box, then pass the paper on.

Third player: do the calculation and pass it to the first player.

The group now has one minute to find the other three number sentences which correspond to the first sentence. At the end of the minute, check the answers by doing each calculaton. The group gets a point for each correct answer.

For round 2, player 2 starts.

	×	=	
. 	×	=	
Round 1	• •	=	
ВС	•	=	
	Score:		
	×	=	
\sim	×	=	
Round 2	• •	=	
В	• •	=	
	Score:		
	×	=	
က	×	=	
Round	• •	=	
щ	• •	=	
	Score:		

(In rounds 4 to 6, make sure that the number you write in the second box is a factor of the number in the first box.)

	•		=	
4	•		=	
Round 4	×		=	
Rc	×		=	
	Score:			
	•		=	
5	•		=	
Round 5	×		=	
Rc	×		=	
	Score:			
	• •		=	
9	• •		=	
Round 6	×		=	
Я	×		=	
	Score:			

Pass it on (multiplication and division)

Persistence numbers

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

Multiplication golf – score sheet

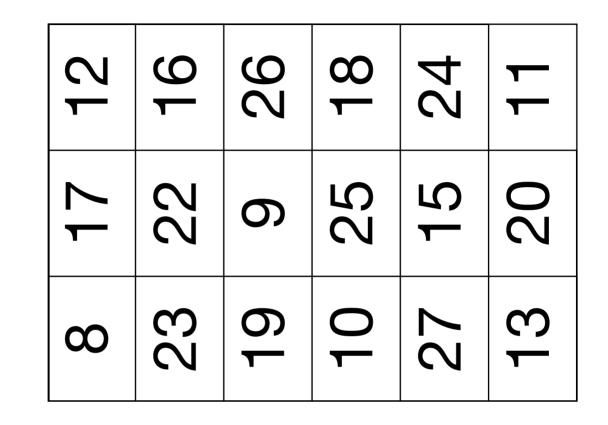
Clubs $2 5 8$	Strengths (1) (6) (7)

Hole	Length	Distance travelled at each stroke	Number of strokes
	26		
2	44		
3	90		
4	81		
5	73		
6	57		
	48		
8	98		
	159		
		Total	

Multiplication golf – score sheet

Strengths

Hole	Length	Distance travelled at each stroke	Number of strokes
2			
3			
5			
6			
\triangleright			
8			
9			
		Total	

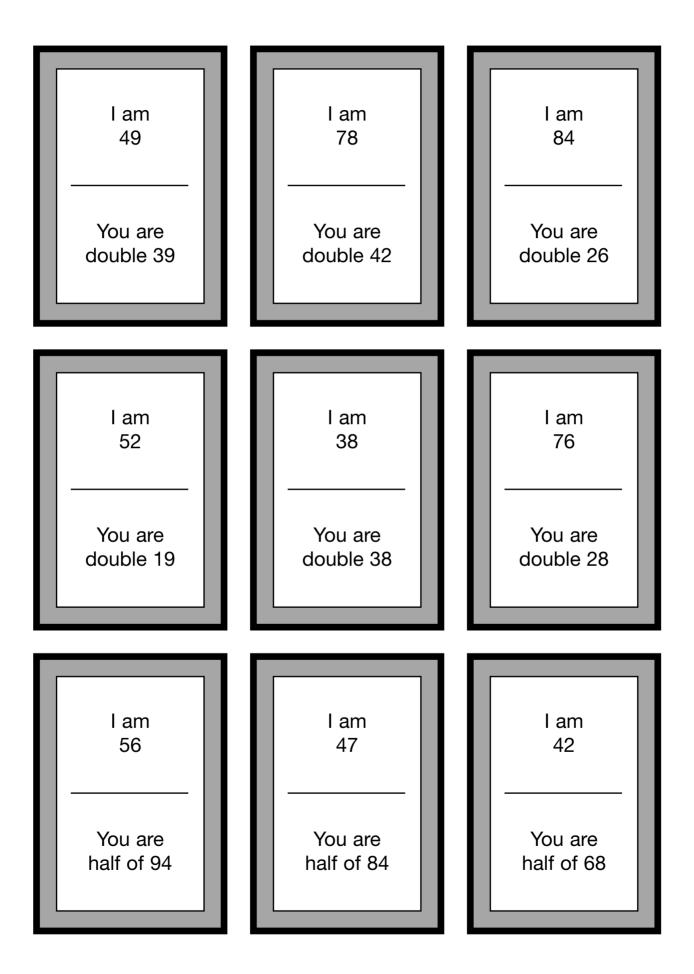


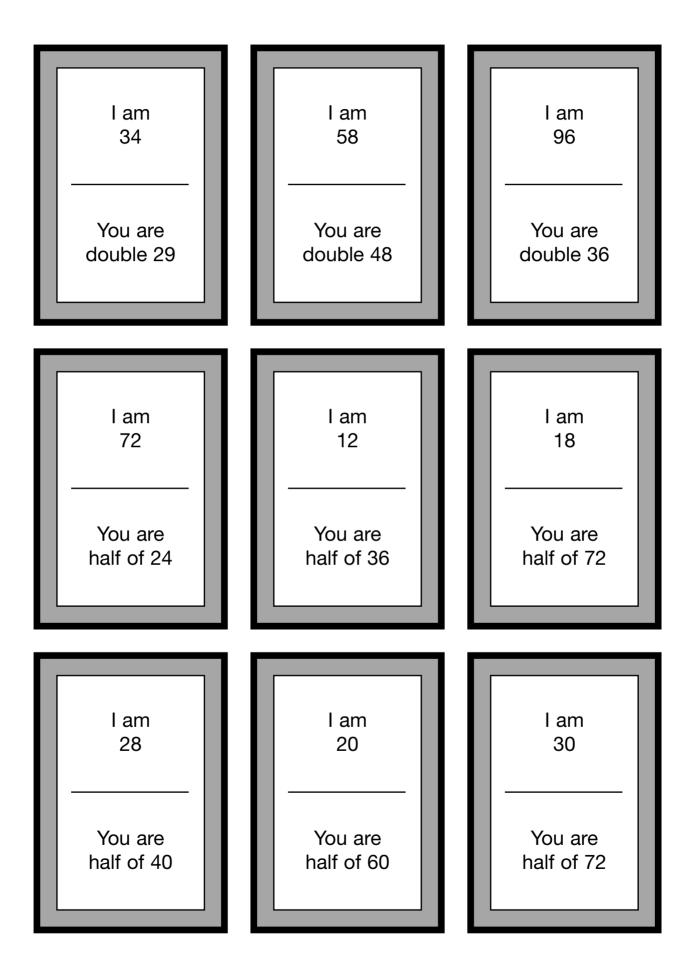
Sevens

Player 1

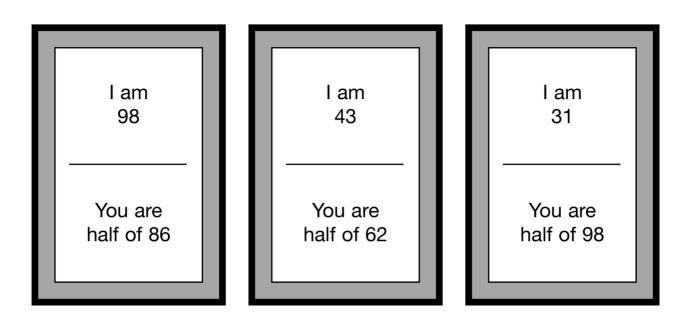
Player 2

12	16	26	С Г	24	-
17	22	တ	25	15	20
∞	23	б	10	27	13









Four in a line – square numbers

16	64	4	81	25	4
81	36	1	100	9	49
9	25	64	49	1	36
49	16	9	100	64	16
1	81	36	4	25	100
36	64	100	25	49	9

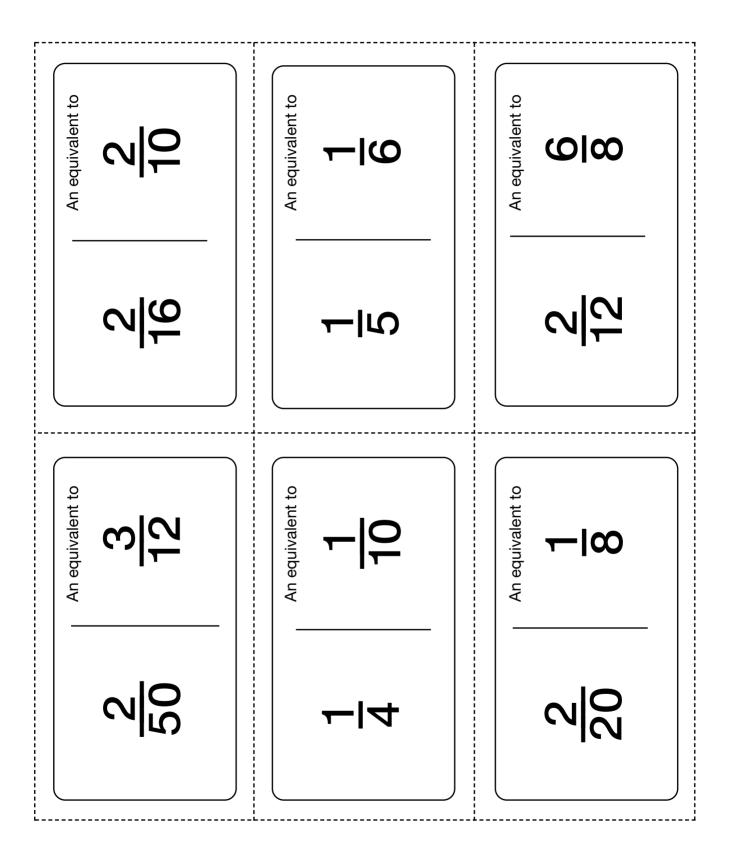
Square numbers investigation

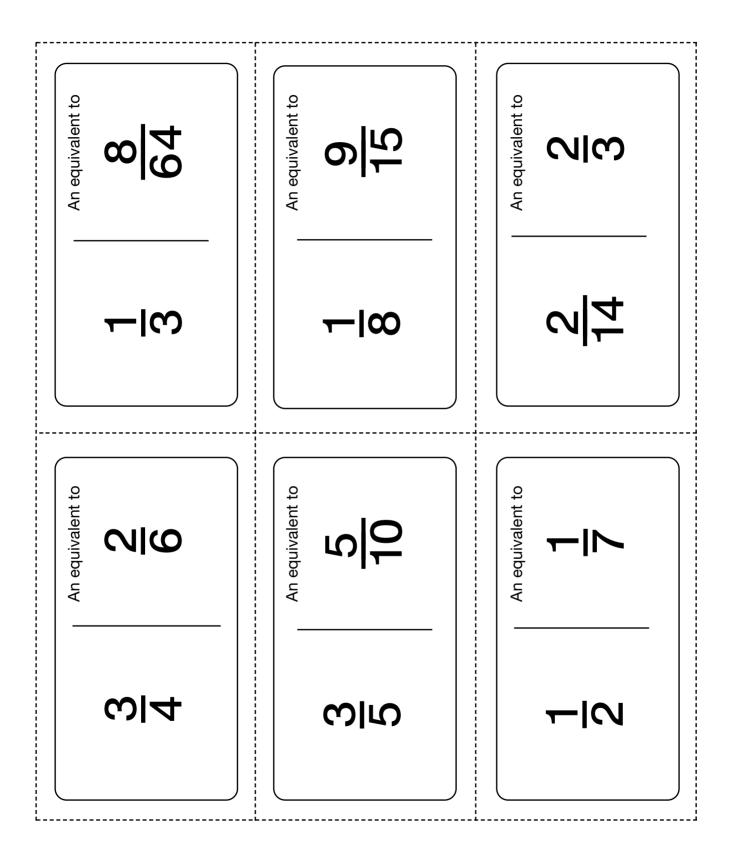
		7					
		6	1	2			
		5	4	3			

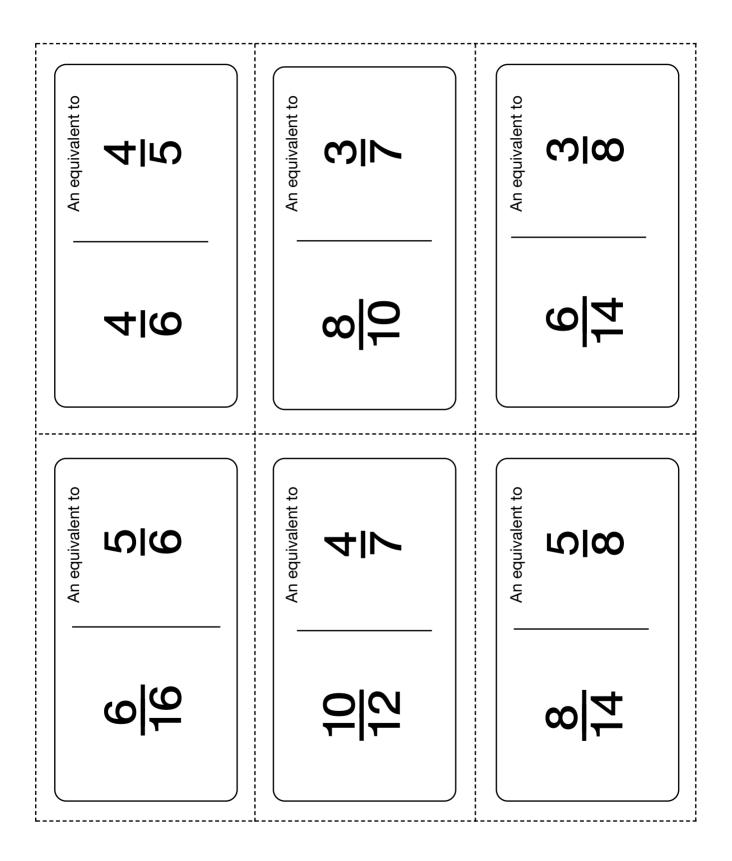
Continue writing the numbers in a spiral pattern. Each time you come to a square number, colour in the squares you have written in since the last square number. Use a different colour each time. This has been started for you.

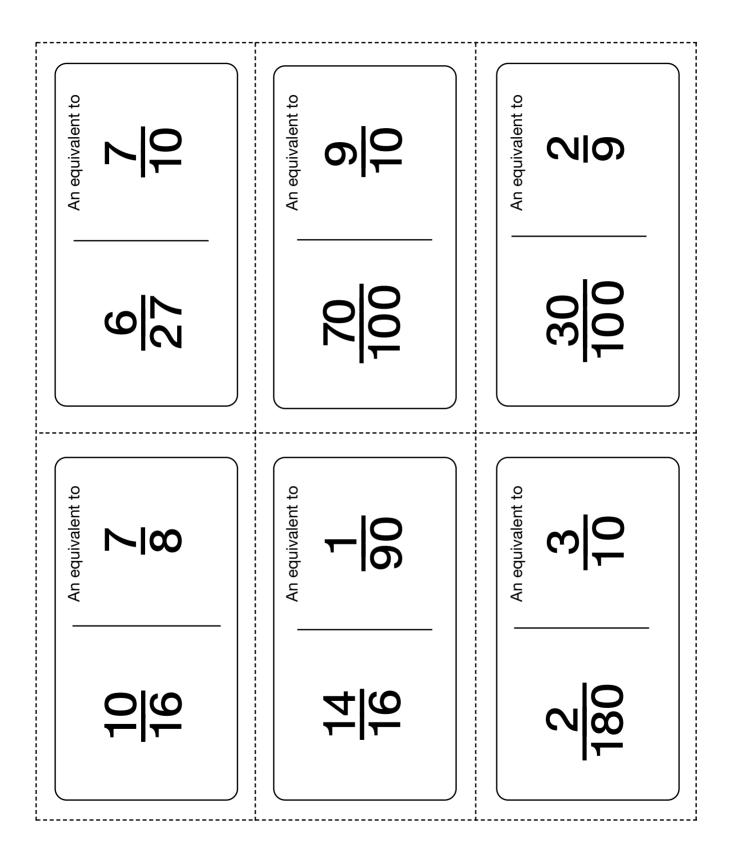
When you get to 100 (or a different number given to you by your teacher), STOP. Draw round the squares using a fine dark felt tip. This has been started for you. Put a ring round the square numbers.

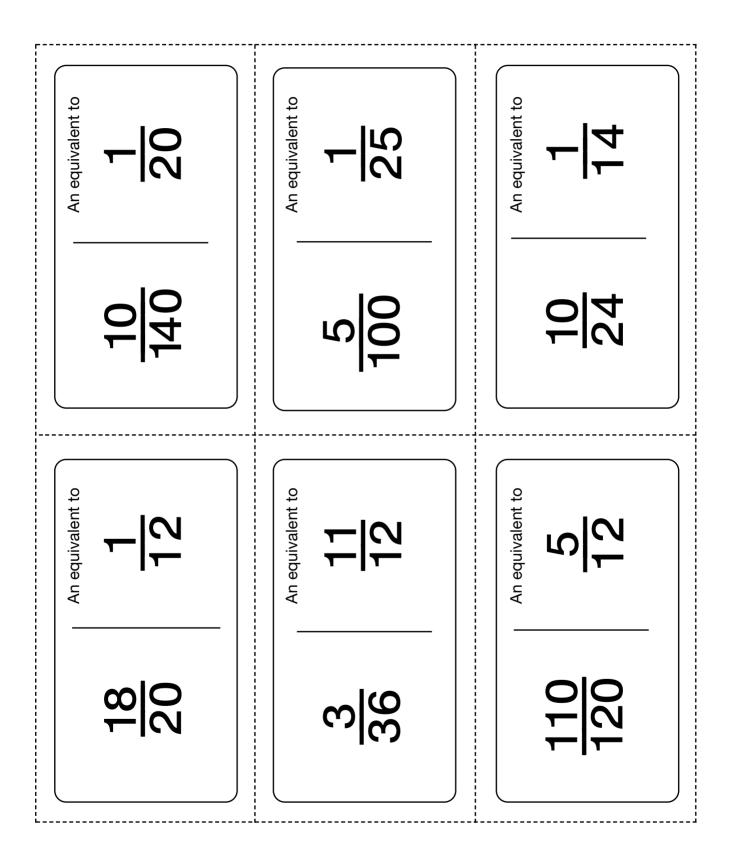
What patterns can you see?











Fraction codes 1

 $\frac{1}{3}$ a city

L	Ρ	А	U	R		D	Ν	S	В
<u> </u>	2 8	<u>5</u> 7	<u>4</u> 12	<u>7</u> 20	<u>6</u> 18	<u>8</u> 24	<u>10</u> 30	3 5	<u>5</u> 15

$\frac{1}{4}$ a fruit

В	0	Ρ	А	Е		Η	С	R	Т
<u>2</u> 7	<u>4</u> 16	<u>11</u> 44	2 8	3 9	<u>10</u> 40	<u>6</u> 25	<u>5</u> 20	<u>12</u> 48	<u>3</u> 12

$\frac{3}{4}$ a sport

R	0	F	G	А	U	В	D	Y	J
<u>8</u>	<u>6</u> 8	<u>15</u>	<u>5</u>	<u>21</u>	<u>9</u>	<u>30</u>	<u>15</u>	<u>66</u>	<u>24</u>
10		25	7	32	12	45	20	99	32

Fraction codes 2

 $\frac{1}{10}$ a drink

R	Е	F	Е	F	Т	0	W	С	A
<u>2</u>	<u>5</u>	<u>9</u>	<u>5</u>	<u>12</u>	<u>3</u>	<u>4</u>	<u>9</u>	<u>6</u>	<u>7</u>
20	60	99	50	96	30	20	90	50	70

$\frac{2}{3}$ a country

Α	Ν	Е	R	S	В	I	Ζ	Q	L
<u>4</u>	<u>9</u>	<u>14</u>	<u>60</u>	<u>16</u>	<u>8</u>	<u>22</u>	<u>20</u>	<u>32</u>	<u>12</u>
6	12	22	90	25	12	33	30	49	18

$\frac{1}{2}$ an animal

Ν	С	U	Е	А	Ν	Т	Y	R	В
<u>5</u>	<u>3</u>	<u>7</u>	<u>6</u> 9	<u>1</u>	<u>17</u>	<u>5</u>	<u>25</u>	5	<u>9</u>
10	18	14		3	34	12	50	15	18



Loop cards – fractions, decimals and percentages



Loop cards – fractions, decimals and percentages

Cut these into cards

% of 25% of 20% of 20 30 30	% of 25% of 20% of 40 40	% of 25% of 20% of 10 40 80	0% of 25% of 20% of 130 56 90 90
50% of 10% of 40 20	50% of 10% of 24 90	50% of 10% of 34 110	50% of 10% o 30 130

Percentage bingo 1 and 2

Cut these into cards

50% of	10% of	50% of	20% of
38	70	2	120
50% of	10% of	25% of	20% of
46	210	20	150
50% of	10% of	25% of	20% of
54	290	112	110
50% of	10% of	25% of	20% of
62	260	100	160

Percentage bingo 1 and 2

	9	14	22	31
Card 2	LL	15		26

	21	24	27	Ŋ
Card 1	17	4	7	œ

	3	18	30	29
Card 4	12	25	C	23

	6	28	19	16
Card 3	20	32	13	10

	50% of	25% of	10% of	50% of
	28	16	90	50
Card 1	10% of	50% of	20% of	10% of
	60	26	120	120
	25% of	20% of	25% of	20% of
	68	140	44	90

	50% of	25% of	10% of	50% of
	34	60	70	38
Card 2	10% of	50% of	20% of	10% of
	130	58	10	80
	25% of	20% of	25% of	20% of
	36	50	84	80

	50% of	25% of	10% of	50% of
	46	108	150	24
Card 3	10% of	50% of	20% of	10% of
	40	16	80	100
	25% of	20% of	25% of	20% of
	72	100	12	60

	50% of	25% of	10% of	50% of
	14	104	50	22
Card 4	10% of	50% of	20% of	10% of
	10	6	150	140
	25% of	20% of	25% of	20% of
	64	100	24	110