Factor Captor

A Multiplication Game

Factor Captor

Materials

- 1 calculator for each player
- paper and pencil for each player
- 1 *Factor Captor* Grid—either Grid 1 or Grid 2 (*Math Masters,* pp. 453 and 454)
- coin-size counters (48 for Grid 1; 70 for Grid 2)

Players 2

Skill Finding factors of a number

Object of the game To have the higher total score.

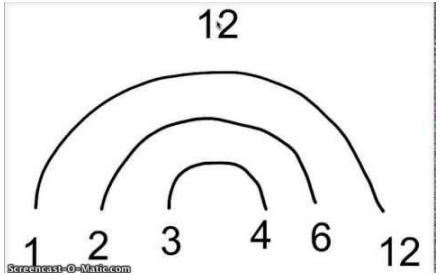
Directions

1. To start the first round, Player 1 chooses a 2-digit number on the number grid, covers it with a counter, and records the number on scratch paper. This is Player 1's score for the round.
2. Player 2 covers all of the factors of Player 1's number. Player 2 finds the sum of the factors and records it on scratch paper. This is Player 2's score for the round.

A factor may only be covered once during a round.

3. If Player 2 missed any factors, Player 1 can cover them with counters and add them to his or her score.
4. In the next round, players switch roles. Player 2 chooses a number that is not covered by a counter. Player 1 covers all factors of that number.
5. Any number that is covered by a counter is no longer available and may not be used again.
6. The first player in a round may not cover a number that is less than 10, unless no other numbers are available.
7. Play continues with players trading roles after each round, until all numbers on the grid have been covered. Players then use their calculators to find their total scores. The player with the higher score wins the game.

The factors for 12 are 1,2,3,4,6, and 12.



I choose 12.

OK. So I will cover all the factors of 12.

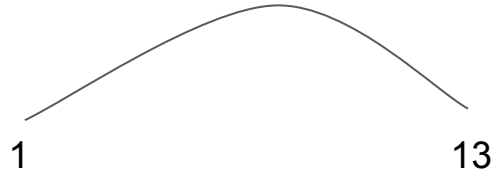
Grid 1 (Beginning Level)

1	2	2	2	2	2
2	3	3	3	3	3
3	4	4	4	4	5
5	5	5	6	6	7
7	8	8	9	9	10
10	11		13	14	15
16	18	20	21	22	24
25	26	27	28	30	32

Grid 1 (Beginning Level)

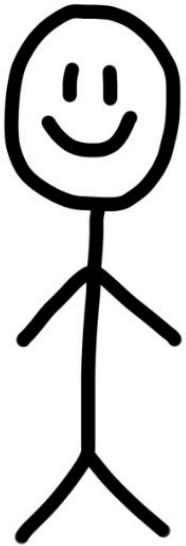
		2	2	2	2
2		3	3	3	3
3		4	4	4	5
5	5	5		6	7
7	8	8	9	9	10
10	11		13	14	15
16	18	20	21	22	24
25	26	27	28	30	32

	Person 1	Person 2
Round 1	12	1+12+2+6+3+4=28
Round 2		

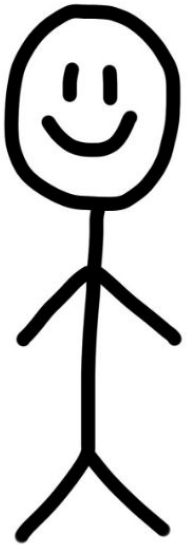


The factors for 13 are 1 and 13.

OK. So I will cover all the factors of 13.



Now I'm first. I choose 13.



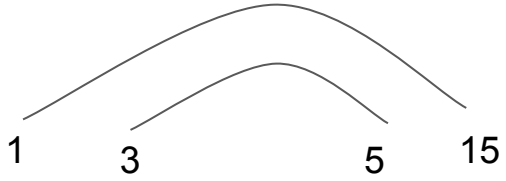
Grid 1 (Beginning Level)

●	2	2	2	2	2
2	3	3	3	3	3
3	4	4	4	4	5
5	5	5	6	6	7
7	8	8	9	9	10
10	11	12	●	14	15
16	18	20	21	22	24
25	26	27	28	30	32

Grid 1 (Beginning Level)

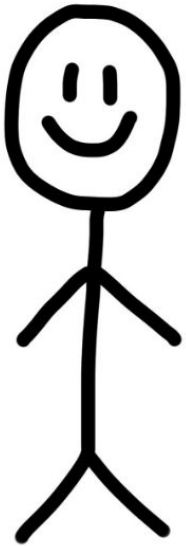
●	●	2	2	2	2
2	●	3	3	3	3
3	●	4	4	4	5
5	5	5	●	6	7
7	8	8	9	9	10
10	11	●	●	14	15
16	18	20	21	22	24
25	26	27	28	30	32

	Person 1	Person 2
Round 1	12	1+12+2+6+3+4=28
Round 2	13+1=14	13

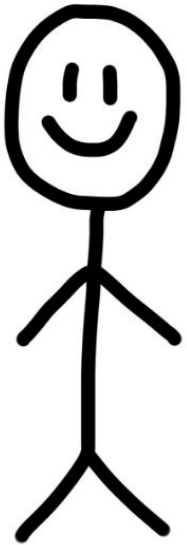


The factors for 15 are 1,3,5, and 15.

I choose 15.



OK. I am covering the factors of 15.



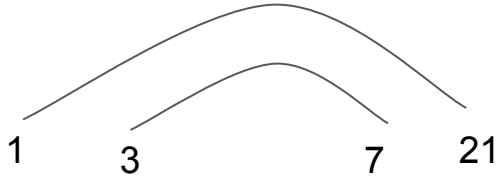
Grid 1 (Beginning Level)

	2	2	2	2	2
2	3	3	3	3	3
3	4	4	4	4	5
5	5	5	6	6	7
7	8	8	9	9	10
10	11	12		14	
16	18	20	21	22	24
25	26	27	28	30	32

Grid 1 (Beginning Level)

		2	2	2	2
2			3	3	3
3		4	4	4	
5	5	5		6	7
7	8	8	9	9	10
10	11			14	
16	18	20	21	22	24
25	26	27	28	30	32

	Person 1	Person 2
Round 1	12	1+12+2+6+3+4=28
Round 2	13+1=14	13
Round 3	15	3+5+15=23 (1 was covered already)
Round 4		



The factors for 21 are 1,3,7 and 21.

I am covering the factors of 21.

I choose 21.

Grid 1 (Beginning Level)

●	2	2	2	2	2
2	●	●	3	3	3
3	4	4	4	4	5
5	5	5	6	6	●
7	8	8	9	9	10
10	11	12	●	14	●
16	18	20	●	22	24
25	26	27	28	30	32

Grid 1 (Beginning Level)

●	●	2	2	2	2
2	●	●	3	3	3
3	●	4	4	4	●
5	5	5	●	6	7
7	8	8	9	9	10
10	11	●	●	14	●
16	18	20	●	22	24
25	26	27	28	30	32

	Person 1	Person 2
Round 1	12	1+12+2+6+3+4=28
Round 2	13+1=14	13
Round 3	15	3+5+15=23 (1 was covered already)
Round 4	3+7+21=31 (1 was already covered)	21
Round 5		
Round 6		

	Person 1	Person 2
Round 1	12	1+12+2+6+3+4=28
Round 2	13+1=14	13
Round 3	15	3+5+15=23 (1 was covered already)
Round 4	3+7+21=31 (1 was already covered)	21
Round 5	14	14+2+7=23
Round 6	22+11+2=35	22
Total of Rounds	121	130

The rounds end whenever time runs out. Add the column totals to determine the winner.