

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.

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	12	13	14	15
16	18	20	21	22	24
25	26	27	28	30	32

Grid 2 (Advanced Level)

1	2	2	2	2	2	3
3	3	3	3	4	4	4
4	5	5	5	5	6	6
6	7	7	8	8	9	9
10	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	30
32	33	34	35	36	38	39
40	42	44	45	46	48	49
50	51	52	54	55	56	60

Example

Round 1: James covers 27 and scores 27 points. Emma covers 1, 3, and 9, and scores $1 + 3 + 9 = 13$ points.

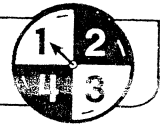
Round 2: Emma covers 18 and scores 18 points. James covers 2, 3, and 6, and scores $2 + 3 + 6 = 11$ points. Emma covers 9 with a counter, because 9 is also a factor of 18. Emma adds 9 points to her score.

Name _____

Date _____

Time _____

Factor Captor Grid 1



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	12	13	14	15
16	18	20	21	22	24
25	26	27	28	30	32

Name _____

Date _____

Time _____

Factor Captor Grid 2



1	2	2	2	2	2	3
3	3	3	3	4	4	4
4	5	5	5	5	6	6
6	7	7	8	8	9	9
10	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	30
32	33	34	35	36	38	39
40	42	44	45	46	48	49
50	51	52	54	55	56	60