## The Factor Game

Number of Players: 2 people

**Materials:** one Factor Game board ( $5 \times 6$  grid, numbered 1 to 30), pencil or counters to mark out or cover spaces

How to Play: The first player chooses a number on the game board and marks or covers it. This is his score for the first round. The second player covers all the factors of the first player's number that are not yet covered and adds their values. This is her score for the first round. (Example: The first player selects 15, which is his score. The second player covers 1, 3, and 5, which are the remaining factors of 15. This gives her a score of 9.) The next round begins when the second player chooses a number, and the first player covers any not covered factors left on the board. Play continues in this manner. If at any time a player selects a number that has no uncovered factors, the opponent does not get any points. The game ends when all the numbers are covered. Points are added, and the player with the greater sum wins.

**Possible Variations:** Use a  $7\times7$  game board with values 1 through 49. For older students, use a  $10\times10$  game board with values 1 through 100.

## $4 \times 4$ Game Board

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

 $5 \times 5$  Game Board

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

 $7 \times 7$  Game Board

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

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