

# Factors

**Objective:** Distinguish among and find multiples, factors, composites and primes, using numbers 1 to 100 [6.N(NC).3].

**Materials:** game board, 2 crayons, calculator.

**Players:** 2 players.

**Rules:**

- [1] The objective of this game is to shade the greatest number of spaces on the Factors gameboard as possible.
- [2] On a turn a player will select any available number (a number not already shaded), and will proceed to shade it as well as all remaining numbers which are a factor of his or her number. For example, if a player choose the number 75, he or she could shade all of the following (assuming they have not already been shaded on an earlier turn or by another player):  

|    |   |   |   |    |    |
|----|---|---|---|----|----|
| 75 | 1 | 3 | 5 | 15 | 25 |
|----|---|---|---|----|----|
- [3] Each player will get three turns. At the end of the third turn, players take the calculator and up the numbers in their shaded spaces.
- [4] If a player fails to shade a factor which he or she could have shaded, the opponent may point out the error and claim that number. If a player shades a number incorrectly, the opponent claims that number.
- [5] The player with the highest sum after three turns wins the game.

**Adaptations:**

- [1] Instead of playing for the highest sum of shaded numbers, play to see who can shade the greatest number of available factors.
- [2] Allow players to use factors more than once. If a player selects 100, the number 100 is out of the game, but the factors (1, 2, 4, 5, 20, 25, and 50) can be used again.

# Factors



|    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|-----|
| 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 |

