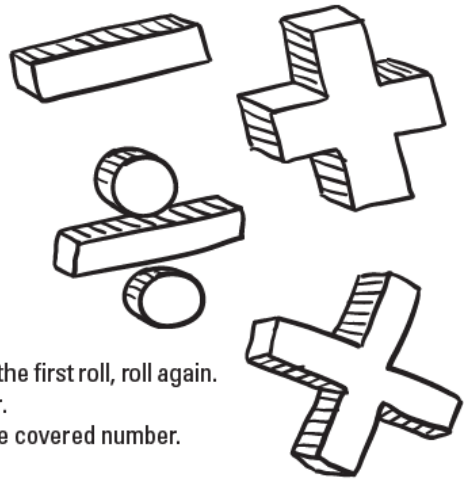
# A-Mazing Functions



**Building Fluency:** follow a given rule or identify a rule

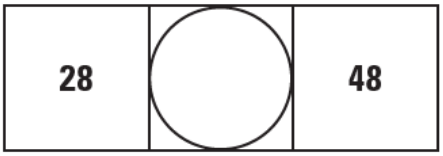
**Materials:** game marker, a die, 32 counters/cubes to cover circles on gameboard

**Number of Players:** 2

**Directions:**

1. Cover each circle with a counter/cube.
2. Place player markers on "start".
3. Roll the die and move your marker that number of spaces around the maze. If you roll 1 on the first roll, roll again.
4. If you land on a covered space, name the function rule that is covered by the counter.
5. Tell how the number before the covered number becomes the number that comes after the covered number.

Example:

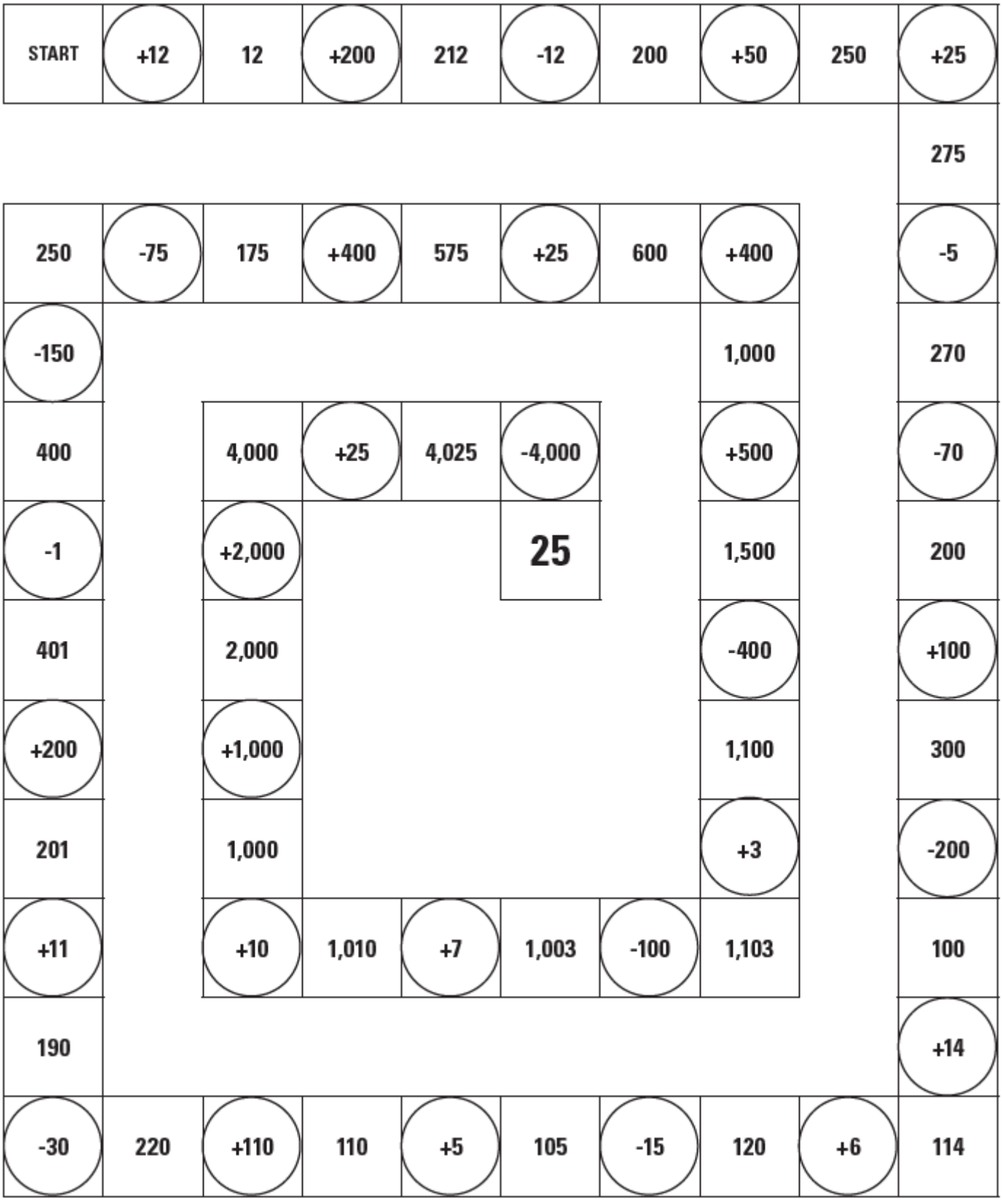


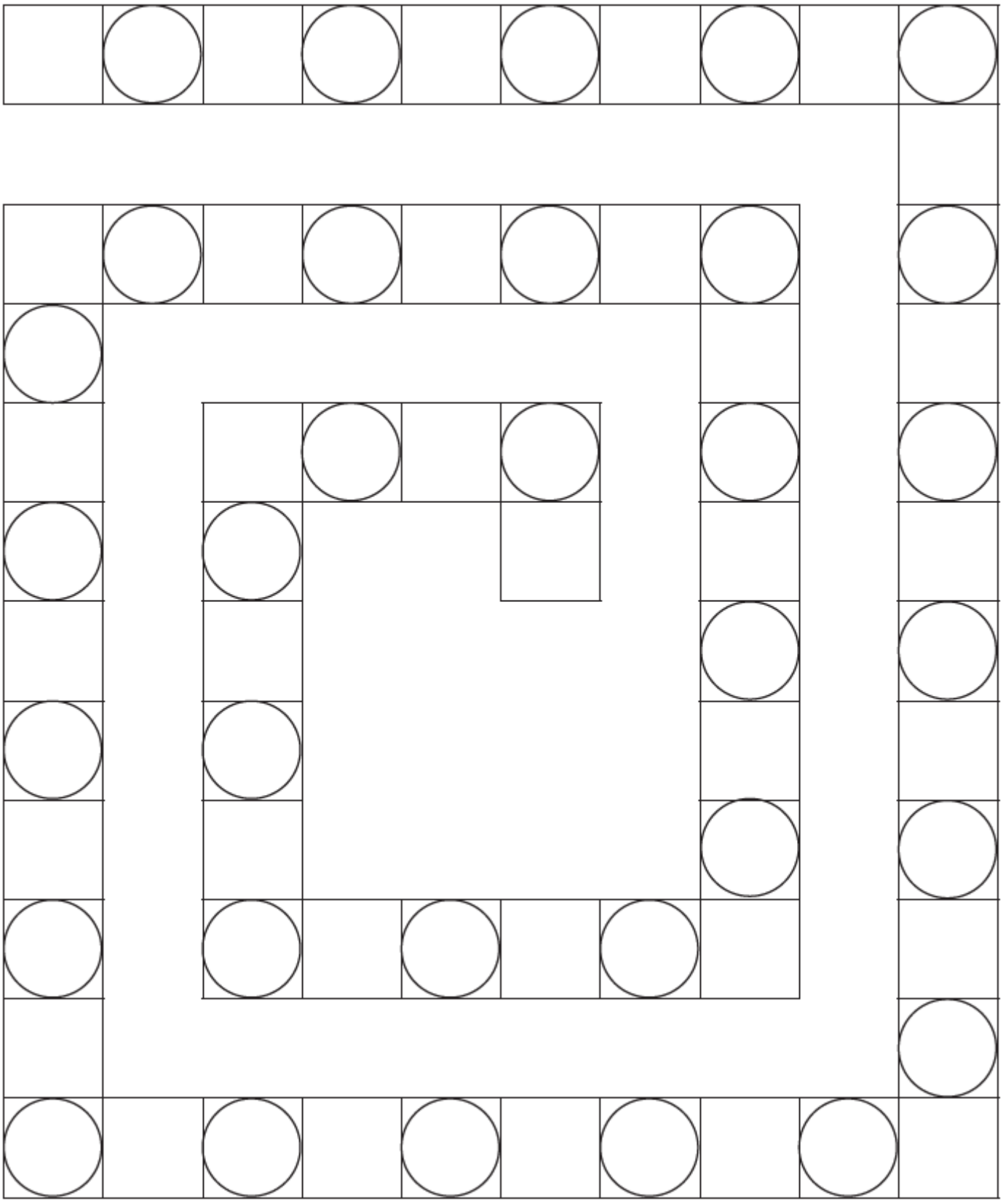

Player says, "The function rule is plus 20 because 28 plus 20 equals 48".
Once player removes the counter they'll see if function rules is correct.

| | | |
|---|---|---|
| 28 | +20 | 48 |

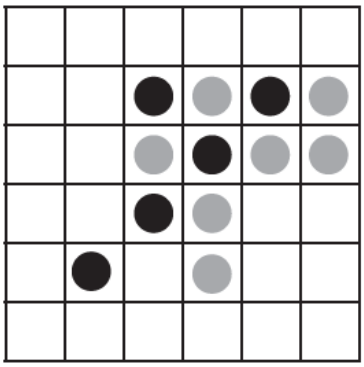
6. If you are correct, keep the counter. If you are not correct, return the counter onto the space.
7. Winner is the player who has the most counters at the end of the game.

**Variation/Extension:** Students can create their own gameboard with function rules, which could include x and ÷.
An additional gameboard is included for youe convenience.


START
+12
12
+200
212
-12
200
+50
250
+25
275
250
-75
175
+400
575
+25
600
+400
-5
-150
1,000
270
400
4,000
+25
4,025
-4,000
+500
-70
-1
+2,000
25
1,500
200
401
2,000
-400
+100
+200
+1,000
1,100
300
201
1,000
+3
-200
+11
+10
1,010
+7
1,003
-100
1,103
100
190
+14
-30
220
+110
110
+5
105
-15
120
+6
114



# Carolina Clip-It



**Building Fluency:** multiplication facts

**Materials:** gameboard, 2 paper clips, game markers (approximately 15 of one color per player)

**Number of Players:** 2

**Directions:**

1. Player one places paper clips on two numbers at the bottom of the page.
2. Then multiply the two numbers and place a marker on the correct product.
3. Player two can move only one of the paper clips at the bottom of the page.
4. Then multiply the two numbers and place a marker on the correct product.
5. Both paper clips may be placed on the same number.
6. Play continues until one player has 4 markers in a row, horizontally, vertically or diagonally.

**Variation/Extension:** Students share strategies of how they learned the more difficult multiplication facts.

| | | | | | |
|---|---|---|---|---|---|
| 1 | 7 | 15 | 25 | 36 | 54 |
| 2 | 8 | 16 | 27 | 40 | 56 |
| 3 | 9 | 18 | 28 | 42 | 63 |
| 4 | 10 | 20 | 30 | 45 | 64 |
| 5 | 12 | 21 | 32 | 48 | 72 |
| 6 | 14 | 24 | 35 | 49 | 81 |

1 2 3 4 5 6 7 8 9

# Charlotte Speedway Race

**Building Fluency:** multiplying whole numbers

**Materials:** gameboard, game marker, a die

**Number of Players:** 2-4

**Directions:**

1. Player rolls die and moves that number of spaces.
2. Player must give a multiplication fact for the product in the space using 6, 7, 8, and 9 as one of the factors.
3. If an incorrect answer is given, player loses turn, and returns to previous position.
4. Winner is the first to cross the finish line.

**Variation/Extension:** Students share strategies of how they learned the more difficult multiplication facts.

Start →

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 49 | 18 | 63 | 28 | 42 | 54 | PIT STOP | 36 | 24 |
| 24 | | | | | | | | 72 |
| 48 | | | | | | | | 64 |
| 27 | | | | | | | | Drafted a New Car – Move Forward 2 Spaces |
| 36 | | | | | | | | 56 |
| Trouble on the Curve – Go Back 2 Spaces | | | | | | | | 48 |
| 54 | 81 | 72 | Your Tire Blows Out – Lose a Turn | 56 | 42 | 63 | 32 | 18 |


# Multiplication Cover-Up

**Building Fluency:** multiplication facts

**Materials:** multiplication game card for each player, something to cover the squares on card, and factor cards

**Number of Players:** 2-12

**Directions:**

1. Choose one player to be the "caller".
2. The "caller" will place the factor cards face down, then turn one over at a time and call out the multiplication expression. (the two factors on the card)
3. If a player has the product of the expression on their grid, they cover it.
4. The first player to cover 5 in a row, column, or diagonally wins the game.

**Variation/Extension:** Students share strategies of how they learned the more difficult multiplication facts. Teacher could have students create their own 5 by 5 board in their math notebook filled with products of their choice and play as a class. Additional blank boards are added for your convenience,

## SAMPLE BOARDS

| | | | | |
|---|---|---|---|---|
| 9 | 64 | 27 | 5 | 56 |
| 0 | 45 | 63 | 21 | 36 |
| 18 | 70 | FREE | 8 | 1 |
| 35 | 81 | 20 | 48 | 100 |
| 28 | 4 | 15 | 54 | 14 |

| | | | | |
|---|---|---|---|---|
| 28 | 70 | 60 | 25 | 15 |
| 40 | 56 | 1 | 10 | 64 |
| 9 | 49 | FREE | 100 | 32 |
| 30 | 48 | 20 | 21 | 72 |
| 5 | 80 | 36 | 30 | 42 |

| | | | | |
|---|---|---|---|---|
| 9 | 64 | 27 | 5 | 56 |
| 0 | 45 | 63 | 21 | 36 |
| 18 | 70 | FREE | 8 | 1 |
| 35 | 81 | 20 | 48 | 100 |
| 28 | 4 | 15 | 54 | 14 |

| | | | | |
|---|---|---|---|---|
| 28 | 70 | 60 | 25 | 15 |
| 40 | 56 | 1 | 10 | 64 |
| 9 | 49 | FREE | 100 | 32 |
| 30 | 48 | 20 | 21 | 72 |
| 5 | 80 | 36 | 30 | 42 |

| | | | | |
|---|---|---|---|---|
| 30 | 63 | 40 | 15 | 42 |
| 48 | 72 | 60 | 6 | 18 |
| 10 | 70 | FREE | 49 | 56 |
| 50 | 32 | 2 | 100 | 25 |
| 35 | 16 | 12 | 27 | 24 |

| | | | | |
|---|---|---|---|---|
| 28 | 14 | 25 | 27 | 7 |
| 12 | 80 | 21 | 63 | 24 |
| 54 | 42 | FREE | 20 | 49 |
| 35 | 72 | 50 | 3 | 30 |
| 18 | 45 | 64 | 81 | 32 |

| | | | | |
|---|---|---|---|---|
| 0 | 70 | 27 | 48 | 1 |
| 2 | 54 | 36 | 14 | 100 |
| 35 | 21 | FREE | 5 | 9 |
| 28 | 4 | 15 | 45 | 6 |
| 64 | 20 | 81 | 8 | 56 |

| | | | | |
|---|---|---|---|---|
| 40 | 10 | 60 | 28 | 9 |
| 21 | 16 | 24 | 36 | 12 |
| 2 | 1 | FREE | 100 | 7 |
| 48 | 6 | 56 | 5 | 72 |
| 30 | 15 | 49 | 3 | 70 |

| | | | | |
|---|---|---|---|---|
| 30 | 25 | 40 | 4 | 18 |
| 32 | 10 | 7 | 3 | 24 |
| 16 | 12 | FREE | 2 | 80 |
| 8 | 6 | 72 | 42 | 63 |
| 49 | 14 | 50 | 60 | 18 |

| | | | | |
|---|---|---|---|---|
| 64 | 42 | 7 | 5 | 63 |
| 12 | 20 | 80 | 27 | 18 |
| 4 | 25 | FREE | 54 | 9 |
| 3 | 35 | 45 | 32 | 15 |
| 14 | 50 | 8 | 81 | 21 |

| | | | | |
|---|---|---|---|---|
| 1 | 21 | 14 | 2 | 35 |
| 20 | 27 | 100 | 12 | 16 |
| 6 | 48 | FREE | 32 | 3 |
| 60 | 45 | 64 | 0 | 25 |
| 7 | 10 | 28 | 18 | 63 |

| | | | | |
|---|---|---|---|---|
| 48 | 0 | 80 | 49 | 63 |
| 27 | 5 | 36 | 12 | 8 |
| 2 | 100 | FREE | 1 | 4 |
| 14 | 24 | 18 | 50 | 36 |
| 25 | 60 | 9 | 70 | 16 |

| | | | | |
|---|---|---|---|---|
| 56 | 15 | 64 | 60 | 54 |
| 8 | 10 | 20 | 42 | 3 |
| 24 | 72 | FREE | 25 | 9 |
| 40 | 5 | 81 | 4 | 45 |
| 2 | 70 | 28 | 30 | 35 |

| | | | | |
|---|---|---|---|---|
| 2 | 48 | 30 | 36 | 16 |
| 7 | 81 | 0 | 3 | 72 |
| 56 | 40 | FREE | 25 | 6 |
| 60 | 42 | 50 | 80 | 49 |
| 21 | 32 | 15 | 24 | 10 |

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| | | FREE | | |
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|---|---|---|---|---|
| 6x0 | 0x8 | 1x1 | 1x2 | 3x1 |
| 1x4 | 4x4 | 9x5 | 8x2 | 6x8 |
| 9x2 | 7x7 | 6x3 | 5x10 | 10x2 |
| 6x9 | 5x4 | 7x8 | 5x1 | 7x3 |
| 10x6 | 1x6 | 6x4 | 9x7 | 7x1 |

| | | | | |
|---|---|---|---|---|
| 3x8 | 8x8 | 1x8 | 5x5 | 7x10 |
| 1x9 | 3x9 | 9x8 | 3x3 | 7x4 |
| 10x8 | 5x2 | 6x5 | 9x9 | 6x2 |
| 8x4 | 10x10 | 3x4 | 7x5 | 6x6 |
| 7x2 | 9x4 | 10x4 | 3x5 | 6x7 |