



Diversions

Wednesday, 18 Aug 2010

Dominoes

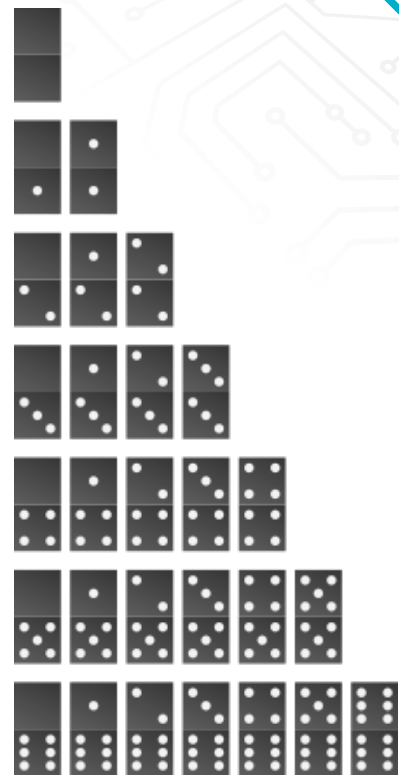
The game of dominoes uses 28 tiles. Each tile is divided into two sides with anywhere from 0 to 6 dots on each side. A standard dominoes set is illustrated on the right.

In the diagram below, all 28 dominoes tiles have been arranged in an 8 by 7 grid. Numbers are used instead of dots.

The outlines of the dominoes have been erased.

Determine how the dominoes are arranged and draw in their outlines.

1	4	1	5	6	4	5	1
3	3	1	3	5	2	2	4
5	0	3	4	5	0	4	3
2	0	2	5	6	3	2	4
5	0	6	0	6	2	6	1
6	0	1	4	4	1	3	2
2	0	6	6	5	3	0	1



Word Problem

In how many subsets of the set $\{1, 2, \dots, 12\}$ is the sum of the smallest element and largest element 13?

Quizmaster: Alex Clark.

Quizmaster Assistants: Reena Bhagani, Andrea Blezy, Rachael Verbruggen



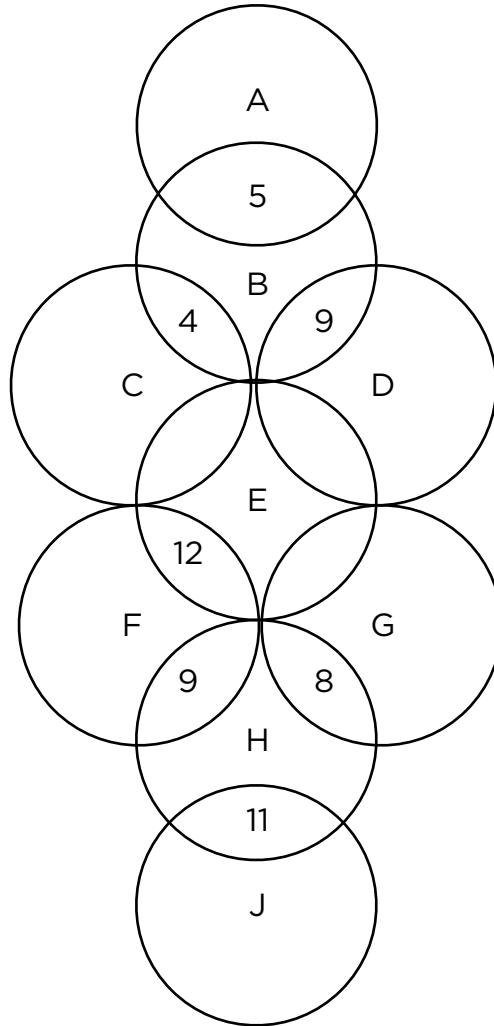
Solutions

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Circle Math

The diagram below is formed by 9 overlapping circles. Each circle contains a letter which represents a unique digit from 1 to 9. The numbers in the intersection of the circles is the sum of the letters in the intersecting circles. What is the value of each letter?

- A = 4
- B = 1
- C = 3
- D = 8
- E = 5
- F = 7
- G = 6
- H = 2
- J = 9



Word Problem

A cake with a square top has icing on the top and the sides. Three people want to share the cake so that each person gets an equal amount of cake and icing. How should the cake be cut?

Solution: Here is one solution. Can you find a simpler solution?

