

# Dice combinations IV

This task is about all the possible outcomes of dice throws.



There are 36 different combinations of numbers possible on the top faces of the two dice.

a) Complete this chart, giving all the possible combinations when two dice are thrown.

| Value on First Dice | Value on Second Dice | Value on First Dice | Value on Second Dice | Value on First Dice | Value on Second Dice |
|---------------------|----------------------|---------------------|----------------------|---------------------|----------------------|
| 1                   | 1                    | 3                   |                      | 5                   |                      |
| 1                   | 2                    | 3                   |                      | 5                   |                      |
| 1                   | 3                    | 3                   |                      | 5                   |                      |
| 1                   |                      | 3                   |                      | 5                   |                      |
| 1                   |                      | 3                   |                      | 5                   |                      |
| 1                   |                      | 3                   |                      | 5                   |                      |
| 2                   |                      | 4                   |                      | 6                   |                      |
| 2                   |                      | 4                   |                      | 6                   |                      |
| 2                   |                      | 4                   |                      | 6                   |                      |
| 2                   |                      | 4                   |                      | 6                   |                      |
| 2                   |                      | 4                   |                      | 6                   |                      |
| 2                   |                      | 4                   |                      | 6                   |                      |

b) Using the table, list all the combinations that add up to 7.

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c) List all the combinations that add up to 9.

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d) Amir needs to throw a total of 7 or 9 with the two dice to win a board game he is playing.

What is the probability that he wins on his next turn? \_\_\_\_\_