**Lower Elementary:**

*Question:* There are six continents on a Risk game board. If there are 12 troops in North America, 16 troops in South America, 18 troops in Europe, 22 troops in Asia, 24 troops in Africa, and 100 troops on the board in total, then how many troops are in Australia?

**Upper Elementary:**

*Question:* Each side of a Monopoly board has 11 spaces from one corner to the next. How many spaces are there around the whole board?

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**Middle School:**

*Question:* In each set of Scrabble tiles, there are 42 vowels, 58 consonants, and 2 blanks. Nine of the tiles are A tiles. What fractional part of the tiles are not A tiles?

**Algebra and Up:**

*Question:* In the game Clue, there are 6 suspect cards, 6 tool cards, and 9 location cards. A combination of 1 suspect, 1 tool, and 1 location is selected at random at the beginning of the game and put in an envelope. What is the probability that the combination in the envelope is the Candlestick, the Library, and anyone but Colonel Mustard?

**Lower Elementary:**

*Question:* There are six continents on a Risk game board. If there are 12 troops in North America, 16 troops in South America, 18 troops in Europe, 22 troops in Asia, 24 troops in Africa, and 100 troops on the board in total, then how many troops are in Australia?

*Answer:* 8 troops

*Solution:* There are 12 + 16 + 18 + 22 + 24 = 92 troops on the board that aren’t in Australia, so there must be 100 – 92 = 8 troops in Australia.

**Upper Elementary:**

*Question:* Each side of a Monopoly board has 11 spaces from one corner to the next. How many spaces are there around the whole board?

*Answer:* 40 spaces

*Solution:* Even though each side has 11 spaces, there aren’t 44 spaces because we’d be counting each corner twice. To find the number of spaces around the board, we only count one of the corners for each side, leaving 10 spaces to count for each side. That’s 10 × 4 = 40 spaces.

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**Middle School:**

*Question:* In each set of Scrabble tiles, there are 42 vowels, 58 consonants, and 2 blanks. Nine of the tiles are A tiles. What fractional part of the tiles are not A tiles?

*Answer:* 31/34

*Solution:* There are 42 + 58 + 2 = 102 tiles in total. If 9 of them are As, then 9/102 = 3/34 of them are A tiles. That means that 34/34 – 3/34 = 31/34 of the tiles are not A tiles.

**Algebra and Up:**

*Question:* In the game Clue, there are 6 suspect cards, 6 tool cards, and 9 location cards. A combination of 1 suspect, 1 tool, and 1 location is selected at random at the beginning of the game and put in an envelope. What is the probability that the combination in the envelope is the Candlestick, the Library, and anyone but Colonel Mustard?

*Answer:* 5/324

*Solution:* The probability that the crime took place in the Library with the Candlestick is 1/9 × 1/6 = 1/54. There are 5 suspects who aren’t Colonel Mustard, so that means that the probability that anybody but Colonel Mustard committed the crime in the Library with the Candlestick is 1/54 × 5/6 = 5/324.