| Half of the students taking a test <br> score less than the average mark. | Nobody scores higher than the <br> average mark in a test. |
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| In a large population of animals, <br> about half of the adult animals are <br> heavier than the average adult <br> weight. | Suppose that in a game you can only <br> score an even number of points: 0,2, <br> 10 or 50. So, the average score over <br> a series of games is an even number. |
| The standard deviation of a random <br> process is not larger than the range <br> of the observed data. | The standard deviation of a random <br> process is not larger than half of the <br> maximum theoretical range of the <br> observed data. |
| The chance of observing an outcome <br> more than three standard deviations <br> from the mean is less than 1 in 100. | I repeat an experiment with a <br> random numerical outcome many <br> times. Eventually the average of my <br> outcomes will be within 1\% of the <br> theoretical average outcome. |
| The chance of observing an outcome <br> more than ten standard deviations <br> from the mean is not more than $1 \%$. | If two statistical processes are <br> uncorrelated then they must be <br> independent. |

