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# Finding the odds

Odds are used to describe the chance of an event occurring. The odds are the ratios that compare the number of ways the event can occur with the number of ways the event cannot occur.

*The odds in favor - the ratio of the number of ways that an outcome can occur compared to how many ways it cannot occur.*

*Odds in favor = Number of successes: Number of failures*

*The odds against - the ratio of the number of ways that an outcome cannot occur compared to in how many ways it can occur.*

*Odds against = Number of failures: Number of successes*

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## Example

A jewelry box contains 5 white pearl, 2 gold rings and 6 silver rings. What are the odds of drawing a white pearl from the jewelry box?

Number of successes = 5

Number of failures =  $2 + 6 = 8$

Numbers of ways to draw a white pearl: number of ways to draw another jewelry.

**5:8**

**The odds are 5:8**

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## Video lesson

What are the odds to draw a blue pen?