

## 4.9: Odds

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**On average, what fraction of people with an odds of 0.37 of defaulting on their credit card payment will actually default?**

Using equation (4.3) for the odds and rewriting the equation as (4.2), we get

$$p/(1 + p) = .37$$

$$p = .37/(1 + .37)$$

$$p = \frac{.37}{1.37}$$

$$.37/1.37$$

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## [1] 0.270073
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$p=0.27$ . So on average, 27% of people with an odds of .37 of defaulting will actually default.

**Suppose that an individual has a 16% chance of defaulting on her credit card payment. What are the odds that she will default?**

Using equation (4.3) once more,

$$.16/(1 - .16)$$

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## [1] 0.1904762
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So a person with 16% chance of defaulting has an odds of defaulting of 0.19.