

9. This problem has to do with *odds*.

- (a) On average, what fraction of people with an odds of 0.37 of defaulting on their credit card payment will in fact default?
- (b) Suppose that an individual has a 16% chance of defaulting on her credit card payment. What are the odds that she will default?

$$(a) \text{ odds} : \frac{p}{1-p}$$

$$\Rightarrow \frac{p}{1-p} = 0.37, \quad 1.37p = 0.37$$

$$\therefore p = \frac{37}{137} \approx \underline{0.27} \quad \times$$

$$(b) \quad p = 0.16$$

$$\therefore \text{odds} = \frac{0.16}{1-0.16} = \frac{16}{84} \approx \underline{0.19} \quad \times$$