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Question a)

$$P(\text{More than 300 passengers show up}) =$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\right.$$

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Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2}}{}\right.$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{}\right.$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324}}\right.$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
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We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
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$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

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We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) =$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase;

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation
Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase; the relative variability increases.

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase; the relative variability increases.

Question c)

$$P(\text{More than 150 pairs show up}) =$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase; the relative variability increases.

Question c)

$$P(\text{More than 150 pairs show up}) = 1 - \Phi\left(\frac{150 + \frac{1}{2} - 0.9 \cdot 162}{}\right.$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase; the relative variability increases.

Question c)

$$P(\text{More than 150 pairs show up}) = 1 - \Phi\left(\frac{150 + \frac{1}{2} - 0.9 \cdot 162}{\sqrt{162 \cdot 0.1 \cdot 0.9}}\right) =$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase; the relative variability increases.

Question c)

$$P(\text{More than 150 pairs show up}) = 1 - \Phi\left(\frac{150 + \frac{1}{2} - 0.9 \cdot 162}{\sqrt{162 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.23) =$$

We define the events S_i that i passengers show up. The probability of the event S_i is given by the Binomial distribution, and can be approximated using the normal approximation

Question a)

$$P(\text{More than 300 passengers show up}) = 1 - P(\text{At most 300 passengers show up}) =$$

$$1 - \Phi\left(\frac{300 + \frac{1}{2} - 0.9 \cdot 324}{\sqrt{324 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.65) = 0.0495$$

Question b) Increase; the relative variability increases.

Question c)

$$P(\text{More than 150 pairs show up}) = 1 - \Phi\left(\frac{150 + \frac{1}{2} - 0.9 \cdot 162}{\sqrt{162 \cdot 0.1 \cdot 0.9}}\right) = 1 - \Phi(1.23) = 0.1093$$