|  |
| --- |
| Consider a reliability distribution where the failure rate is given by https://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0072.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0028.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0074.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0029.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/003D.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0030.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/002C.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0074.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/003C.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0030.png, and https://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0072.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0028.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0074.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0029.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/003D.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0073.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0069.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/006E.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0028.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0074.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0029.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/002B.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0031.png, for https://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0074.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/2265.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0030.png. What is the reliability at https://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Math/Italic/100/0074.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/003D.pnghttps://cle.nps.edu/library/js/MathJax/fonts/HTML-CSS/TeX/png/Main/Regular/100/0031.png?  |

## Decision Analysis

If P(high) = .3, P(low) = .7, P(favorable | high) = .9, and P(unfavorable | low) = .6, then P(favorable) =

|  |  |
| --- | --- |
| a. | .10 |
| b. | .27 |
| c. | .30 |
| d. | .55Which of the methods for decision making best protects the decision maker from undesirable results?

|  |  |
| --- | --- |
| a. | the optimistic approach |
| b. | the conservative approach |
| c. | minimum regret |
| d. | minimax regret |

 |

Sensitivity analysis considers

|  |  |
| --- | --- |
| a. | how sensitive the decision maker is to risk. |
| b. | changes in the number of states of nature. |
| c. | changes in the values of the payoffs. |
| d. | changes in the available alternatives. |

## Simulation

The number of units expected to be sold is uniformly distributed between 300 and 500. If r is a random number between 0 and 1, then the proper expression for sales is

|  |  |
| --- | --- |
| a. | 200(r) |
| b. | r + 300 |
| c. | 300 + 500(r) |
| d. | 300 + r(200) |

In a Monte Carlo simulation, each simulation trial is dependent upon the result of a previous trial. True or False.

Simulation:

|  |  |
| --- | --- |
| a. | does not guarantee optimality. |
| b. | is flexible and does not require the assumptions of theoretical models. |
| c. | allows testing of the system without affecting the real system. |
| d. | all of the alternatives are correct. |

A quantity that is difficult to measure with certainty is called a

|  |  |
| --- | --- |
| a. | risk analysis. |
| b. | project determinant. |
| c. | probabilistic input. |
| d. | profit/loss process. |