MIT Introduction to Statistics 18.05 Reading 7 Think Questions

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Contents

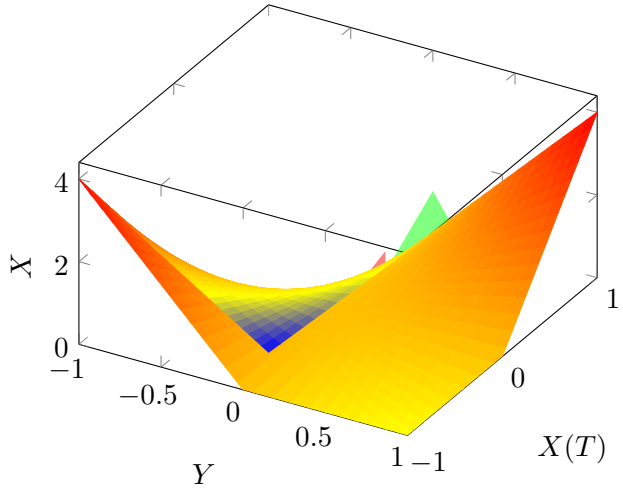
1 References and License

We are answering questions in the material from MIT OpenCourseWare course 18.05, Introduction to Probability and Statistics.
In this document we are answering questions Orloff and Bloom ask in [1].
Please see the references section for detailed citation information.

We use documentation in [2] to write LaTeXsource code for this document.

2 Surface Plot

In [1], Orloff and Bloom ask us to sketch a plot of $f(x, y) = 4xy$, and visualize the probabilty $P(A)$ as a volume for example 5. We should mention that example 5 from [1] is the event $X < 0.5, Y > 0.5$.
Here is a plot of $f(x, y)$, with the volume of the event A shaded:



References

[1] Jeremy Orloff and Jonathan Bloom. *Continuous Random Variables Class 5, 18.05, Spring 2014 Jeremy Orloff and Jonathan Bloom.* Available at `https://ocw.mit.edu/courses/mathematics/18-05-introduction-to-probability-and-statistics-spring-2014/readings/MIT18_05S14_Reading5b.pdf` (Spring 2014).

[2] StackExcahnge.com user Tom Bombadil. *Continuous Random Variables Class 5, 18.05, Spring 2014 Jeremy Orloff and Jonathan Bloom.* Available at `https://ocw.mit.edu/courses/mathematics/18-05-introduction-to-probability-and-statistics-spring-2014/readings/MIT18_05S14_Reading5b.pdf` (Spring 2014).