Exam Tables **10M**

During the exam, you will have access to exam tables containing information to assist you in solving exam problems. For CBT candidates, it is important that you practice using the tables on a computer before taking the test. In addition to the exam table, you will also have access to the normal distribution calculator in CBT.

Here is the link to the FAM-S exam tables. It is the same as the one used for Exam STAM.
Here is the link for the normal distribution calculator used in CBT.

What's included in the exam tables?

Appendix A contains the continuous distributions. Section A.1 defines the **incomplete gamma function** and **incomplete beta function**. These functions are needed to evaluate the CDF of the gamma and beta distributions, respectively.

It is in your best interest to be familiar with the way the continuous distributions are organized. Knowing where the common distributions are will minimize the amount of time spent looking for them during the exam.

- From Section A.2 to A.3, the continuous distributions are sorted by the number of parameters in descending order, starting with distributions with three parameters, then two, then one.
- This pattern stops at Section A.5 where distributions that don't fit into any of the last three sections are listed. Only the lognormal and single-parameter Pareto distributions are important.
- Section A.6 lists distribution with finite support, i.e. the possible values are on a bounded interval. Only the beta distribution is important.

Appendix B contains the discrete distributions. Section B.2 lists the $(a,\ b,\ 0)$ class distributions and Section B.3 lists the $(a,\ b,\ 1)$ class distributions.

Which functions/formulas are included?

The exam tables include the following four basic functions/formulas for every continuous distribution (except log-t): the **PDF**, the **CDF**, the **raw moments**, and the

limited moments.

The exam tables also provide other useful formulas for some distributions. The table below summarizes the additional formulas the exam tables provide for common distributions.

Distribution	$\mathbf{VaR}_p(X)$	$\mathbf{TVaR}_p(X)$	Mode
Pareto	✓	✓	✓
Inverse Pareto	✓		✓
Gamma			✓
Inverse gamma			✓
Weibull	✓		✓
Inverse Weibull	✓		✓
Exponential	✓	✓	✓
Inverse exponential	✓		✓
Lognormal			✓
Single-parameter Pareto	✓	✓	✓
Beta			

As for the discrete distributions, you are provided with the **PMF**, ***a*** and ***b***, the **mean**, and the **variance**. These will be provided for both the original class and the zero-truncated subclass.

Section B.3.2 explains how to convert zero-truncated formulas to corresponding zero-modified formulas.

Coach's Remarks

Unless otherwise specified, the continuous distributions in the tables have a domain of $x > 0$. The same range also applies to the parameters.

Coach's Remarks

There are some formulas in the exam tables (e.g., PMF of negative binomial distribution) that feature an expression that looks like "$r\,(r+1)\ldots(r+k-1)$".

It refers to a product series that starts from r, has a step of 1, and ends at $(r+k-1)$. For example,

- if $k=1$, then the product series starts from r and ends at $r+1-1=r$. So, the result is r.
- if $k=4$, then the product series starts from r and ends at $r+4-1=r+3$. So, the result is $r\,(r+1)\,(r+2)\,(r+3)$.

Despite the large number of continuous distributions in Appendix A, you do not need to know all of them. However, you need to be familiar with the commonly tested distributions to be able to use the exam tables efficiently.

Here is the list of the continuous distributions that will be covered in the remainder of this section:

- **Pareto**
  - Inverse Pareto
  - Single-Parameter Pareto
- **Gamma**
  - Exponential
  - Weibull
  - Inverse gamma
  - Inverse exponential
  - Inverse Weibull
- **Beta**
  - Uniform
- **Normal**
  - Standard normal
  - Lognormal

The discrete distributions will be discussed separately in the next section.
