

$$X \cdot b = X'$$

The diagram illustrates the multiplication of two probability distributions. On the left, X is represented by a square containing a black-outlined normal distribution curve with three horizontal dots below it. This is followed by a black dot representing multiplication. Next is b , represented by a square containing a narrow red-filled normal distribution curve. This is followed by an equals sign. On the right, X' is represented by a square containing a black-outlined normal distribution curve with three horizontal dots below it.

$$X' \xrightarrow{e^x} X''$$

The diagram shows a transformation of a probability distribution. On the left, X' is represented by a square containing a black-outlined normal distribution curve with three horizontal dots below it. An arrow points to the right, with the label e^x positioned above it. On the right, X'' is represented by a square containing a black-outlined normal distribution curve with three horizontal dots below it.

$$A \cdot X'' + C = \mu$$

The diagram illustrates the addition of two probability distributions. On the left, A is represented by a square containing a red-filled normal distribution curve. This is followed by a black dot representing multiplication. Next is X'' , represented by a square containing a black-outlined normal distribution curve with three horizontal dots below it. This is followed by a plus sign. Next is C , represented by a square containing a red-filled normal distribution curve. This is followed by an equals sign. On the right, μ is represented by a square containing a black-outlined normal distribution curve with three horizontal dots below it.

$Y \sim \text{Normal}(\mu, \sigma)$