

Formulario

Cálculo de probabilidades - Evaluación 2

Variable aleatoria continua

```
f <- function(x){x}
integrate(f, liminf, limsup)$value
```

$$E(X) = \int_0^{\infty} (1 - F(x))dx - \int_{-\infty}^0 F(x)dx$$

Variable aleatoria mixta

$$E(Y) = \alpha \sum_j y_j f_Y^d(y_j) + (1 - \alpha) \int_{-\infty}^{\infty} y f_Y^{ac}(y) dy$$

Variable aleatoria mezcla

$$V(X) = \sum_{i=1}^k \pi_i \text{Var}(X \mid Z = i) + \sum_{i=1}^k \pi_i (E(X \mid Z = i) - E(X))^2$$