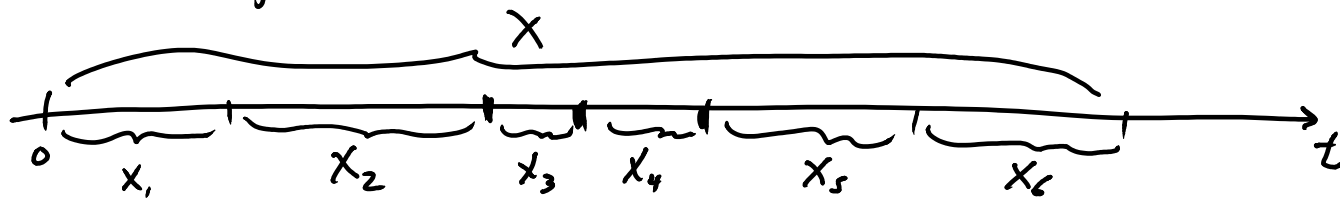


Visualization about Gamma random variables.

Say  $X$  is a Gamma random variable with  $\lambda = \frac{3}{4}$  and  $r = 6$ .

Then  $X$  has the same distribution as  $X_1 + X_2 + \dots + X_6$   
where the  $X_j$ 's are independent exponential random variables.



Think:  $X$  is the total waiting time until the 6th event occurs.

$X_1$  is the time until the 1st event

$X_2$  is the time after the first event until the second event

$X_3$  is the time after the second event until the third event

.....

$X_6$  is the time after the fifth event until the sixth event.