



**MathsNET**

A joined up approach to  
teaching and learning  
mathematics

# The geometric random variable

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- Suppose that  $X$  is a geometric random variable and draw a tree diagram that illustrates how the benrnoulli trials that compose this random variable pan out for  $X = 1$ ,  $X = 2$  and  $X = 3$
- Assuming that the probability of suces in each individual trial is equal to  $p$  write out expressions for  $P(X = 0)$ ,  $P(X = 1)$ ,  $P(X = 2)$  and  $P(X = 3)$  if  $X$  is a geometric random variable.
- Write out an expression for the geometric random variable.
- Explain what range of values a geometric random variable  $X$  can take.