Question 4 **(6 marks)**

(a)   The uniformly distributed continuous random variable X has an expected value of 6 and a maximum value of 9. Determine the variance of X. (3 marks)

(b)   The binomially distributed discrete random variable W has a mean of $\dfrac{1}{2}$ and a variance of $\dfrac{5}{12}$. Evaluate $P(W=1)$. (3 marks)