

1 Knowing that  $V(X) = E(X^2) - \mu^2$ , find simple expressions for  $V(cX)$  and  $V(X + c)$ , for a constant  $c$ .

2 If  $X$  and  $Y$  are independent random variables, then  $V(X + Y) = V(X) + V(Y)$ . What is  $V(X)$  if  $X$  is the number of successes out of  $n$  Bernoulli trials with probability  $p$ ?