

## quiz 02.1

(1) How many injections are there from a set with 4 elements to a set with 7 elements?

(2) An affine cipher with unknown key  $(a, b)$  encrypts  $E_{a,b}('r') = 'p'$  and  $E_{a,b}('k') = 'g'$ . Determine the key.

(3) How many pairs of disjoint 4-element and 5-element subsets of a 13-element set are there?

(4) There are 4 blue balls and 3 red balls in an urn. What is the probability of drawing at least 6 blue balls out of 9 draws (with replacement)?