

$$1. a) c_1 = \frac{13!}{4! \cdot 9!} - \text{комб-и из 4х простых}$$

$$c_2' = \frac{52!}{4! \cdot 48!} - \text{все комб-и.}$$

$$p = \frac{c_1}{c_2} = 0.0026$$

$$b) c_1 = \frac{4!}{1! \cdot 3!} - \text{комб-и букв}$$

$$c_2 = \frac{51!}{3! \cdot 48!} - \text{комб-и 3х перст. букв}$$

$$p = c_1 \cdot c_2 = 83300 - 3 перст. + 193$$

$$p' = p / c_2' = 0.3077$$

$$2. c = \frac{10!}{3! \cdot 7!} = 120 - \text{комб-и 3х чисел}$$

$$p = 1/c = 0.0083 - \text{вер-но 1й номер}$$

$$3. p = \frac{9}{15} \cdot \frac{8}{14} \cdot \frac{7}{13} = 0.1846$$

$$4. p = \frac{2}{100} \cdot \frac{1}{99} = 0.0002$$