

## 2.37 Probability of a code

The code of a safe consists of four distinct digits. Find

a) The probability that the code includes neither digit 3 nor digit 4

$$\text{number of possibilities} = (10)(9)(8)(7) =$$

$$\text{not 3 or 4} = \frac{(\cancel{8})(7)(6)(5)}{(10)(9)(\cancel{8})(\cancel{7})} = \frac{6 \times 5}{10 \times 9} = \boxed{\frac{1}{3}}$$

b) The probability that the code includes digit 3 but not digit 4

Since code must have digit 3

$$(1) * (8) * (7) * (6)$$

$$= \frac{8 * 7 * 6}{10 * 9 * \cancel{8} * \cancel{7}} = \frac{6}{10 * 9} = \boxed{\frac{1}{15}}$$

unsure of the answer  
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## 2.39 Effect of nonoccurrence.

For Example 2.24, show that  $P\{A_n^c | E_n^c\} > P\{A_{n-1}^c | E_{n-1}^c\} > P\{A_1 | E_1^c\}$ ,  $\forall n > 2$ .

Can't complete this problem because

I do not have a copy of example 2.24