

(2) drawer of socks 7 black, 8 blue, 9 green

2 socks are chosen randomly

(a) probability they match?

$\frac{7}{24} \cdot \frac{6}{23}$... probability of choosing two black socks

$\frac{8}{24} \cdot \frac{7}{23}$... " " blue —"

$\frac{9}{24} \cdot \frac{8}{23}$... " " green —"

$$\Rightarrow \frac{7}{24} \cdot \frac{6}{23} + \frac{8}{24} \cdot \frac{7}{23} + \frac{9}{24} \cdot \frac{8}{23} = \frac{42+56+72}{552} = \frac{170}{552} = 0,308$$

(b) probability of black pair?

$$\Rightarrow \frac{7}{24} \cdot \frac{6}{23} = \frac{42}{552} = 0,076$$