

Заг 55 B
45 G

$$P(\text{верно} / G) = 0,7$$

$$P(\text{верно} / B) = 0,4$$

$$P(GGG / 2 \text{ верн и } 1 \text{ неверн}) = ?$$

$$GGG \quad H_1 = \{ \text{исправна са } GGG \}$$

$$GGB \quad H_2 = \{ \text{---} // \text{---} GGB \}$$

$$GBB \quad H_3 = \{ \text{---} // \text{---} GBB \}$$

$$BBB \quad H_4 = \{ \text{---} // \text{---} BBB \}$$

$$P(H_3) = \frac{\binom{45}{1} \binom{55}{2}}{\binom{100}{3}} = \dots$$

$$P(A/H_3) = 0,4^2 \cdot 0,3 + 2 \cdot 0,6 \cdot 0,4 \cdot 0,2$$

$$P(H_4) = \frac{\binom{55}{3}}{\binom{100}{3}}$$

$$P(A/H_4) = 0,4^2 \cdot 0,6 \cdot 3$$

$$A = \{2 \text{ верн и } 1 \text{ неверн}\}$$

$$P(H_1 / A) = ?$$

$$P(H_1) = \frac{\binom{45}{3}}{\binom{100}{3}} = \frac{45 \cdot 44 \cdot 43}{100 \cdot 99 \cdot 98}$$

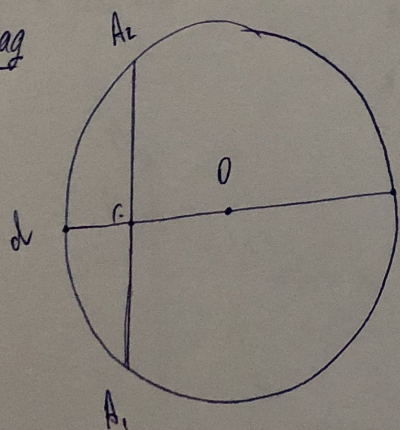
$$P(A/H_1) = 3 \cdot 0,7^2 \cdot 0,3$$

$$P(H_2) = \frac{\binom{55}{2} \binom{45}{1}}{\binom{100}{3}}$$

$$P(A/H_2) = 0,7^2 \cdot 0,6 + 0,4 \cdot 0,7 \cdot 0,3 \cdot 2$$

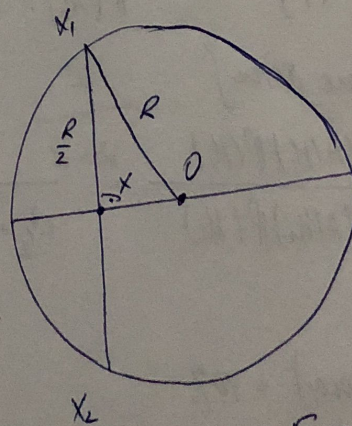
$$P(H_2 / A) = \frac{P(A/H_2) P(H_2)}{\sum P(A/H_i) P(H_i)}$$

Визг

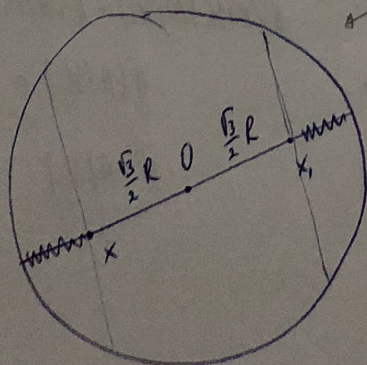


$$P(A, A_2 < d)$$

търсим на X отс d: $x, x_2 = R$



$$OX = \sqrt{R^2 - \left(\frac{R}{2}\right)^2} = \frac{\sqrt{3}}{2}$$



$$\Rightarrow P(A, A_2 < d) = \frac{2R - 2 \frac{\sqrt{3}}{2} R}{2R} = \frac{2 - \sqrt{3}}{2}$$