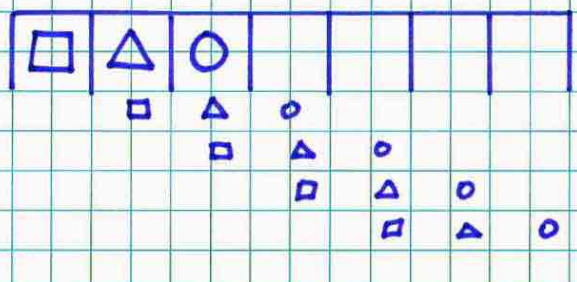
1. a.) $10 \cdot 9 \cdot 8 \cdot 7 = \underline{\underline{5'040}}$

b.) $\frac{8 \cdot 7 \cdot 6 \cdot 5 \cdot 4}{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = \underline{\underline{56}}$

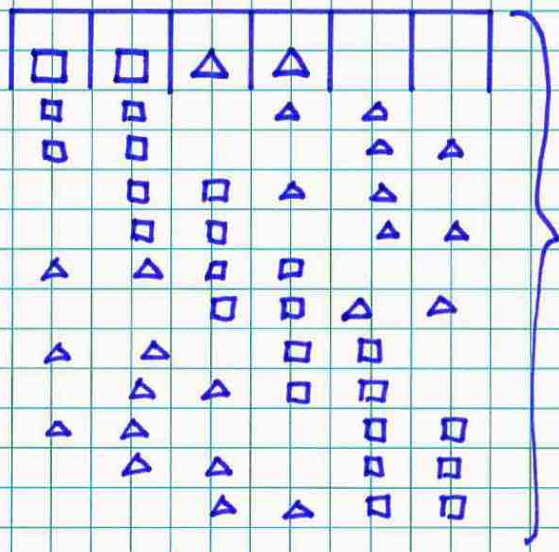
2.



5 Positionen

$\Rightarrow 5 \cdot 3 \cdot 2 \cdot 1 = \underline{\underline{30}}$

3.



12 Positionen

$\Rightarrow \underline{\underline{12}}$

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4. $4 \cdot 3 \cdot 2 \cdot 1 = \underline{\underline{24}}$

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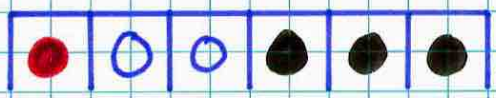
5. $\frac{9 \cdot 8 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}{3 \cdot 2 \cdot 1} = \underline{\underline{60'480}}$

3x Buchstabe „L"

6.



– Bsp.

$$\frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}{2 \cdot 1 \cdot 3 \cdot 2 \cdot 1} = \underline{\underline{60}}$$

2 x, weiss! — 3 x, schwarz!

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7. Augensumme 9: 3/6 ; 4/5 ; 5/4 ; 6/3 .

$$\Rightarrow \quad W = 4 \cdot \frac{1}{6} \cdot \frac{1}{6} = 4 \cdot \frac{1}{36} = \frac{\cancel{4}}{\cancel{36}_9} = \underline{\underline{\frac{1}{9}}}$$

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8. Augensumme 5: 1/4 ; 2/3 ; 3/2 ; 4/1 .

$$\Rightarrow \quad W = 1 - 4 \cdot \frac{1}{6} \cdot \frac{1}{6} = 1 - \frac{4}{36}$$

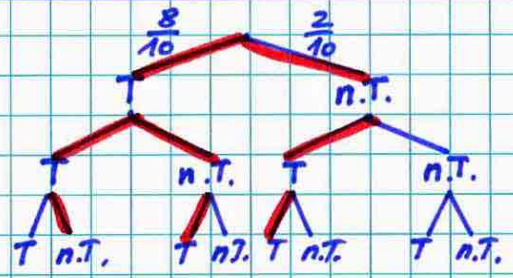
$$= \frac{36}{36} - \frac{4}{36} = \frac{\overset{8}{\cancel{32}}}{\cancel{36}_9} = \underline{\underline{\frac{8}{9}}}$$

9.

$$W = 3 \cdot \frac{8}{10} \cdot \frac{8}{10} \cdot \frac{2}{10}$$

$$= 3 \cdot \frac{128}{1'000}$$

$$= 3 \cdot \frac{16}{125} = \underline{\underline{\frac{48}{125}}}$$



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10. Gegenwahrscheinlichkeit berechnen: „nie eine Sechs".

$$\rightarrow W_G = \frac{5}{6} \cdot \frac{5}{6} \cdot \frac{5}{6} \cdot \frac{5}{6} \cdot \frac{5}{6} = \underline{\underline{\frac{3'125}{7'776}}}$$

$$\Rightarrow \quad W = 1 - \frac{3'125}{7'776} = \underline{\underline{\frac{4'651}{7'776}}}$$