1. a.

H_R	H_Y	H_B
T_R	T_Y	T_B

b.

R	Y	B
T	T	T
T	T	H
~~T~~	~~H~~	~~T~~
T	H	H
~~H~~	~~T~~	~~T~~
~~H~~	~~T~~	~~H~~
~~H~~	~~H~~	~~T~~
H	H	H

$\frac{1}{8}$ probability of each event occurring

c.

0 H	1 H	2 H	3 H

d.

outcome	probability
0 H	$\frac{1}{8}$
1 H	$\frac{3}{8}$
2 H	$\frac{3}{8}$
3 H	$\frac{1}{8}$

e. $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$

f. $P(\text{Even } \# \ H) = \frac{1}{8} + \frac{3}{8} = \frac{4}{8} = \frac{1}{2}$

In order to be independent, $P(AB) = P(A)P(B)$

A and B are mutally exclusive. $\varnothing \neq \frac{1}{2}\,\frac{1}{2}$

2. a.

1T	2T	3T	4T	5T	6T
1H	2H	3H	4H	5H	6H

H	1	2	3
T	4	5	6

Why no like this?

b.

1 H	1T
2 H	2T
3 H	3T
4 H	4T
5 H	5T
6 H	6T

12 options

probability of each event is $\frac{1}{12}$

c. $P(A) = 6\left(\frac{1}{12}\right) = \frac{1}{2}$

$P(B) = 3\left(\frac{1}{12}\right) = \frac{1}{4}$

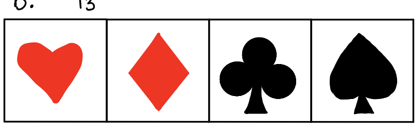
$P(A \cap B) = P(AB) = P(A)P(B)$

$P(A \cap B) = \frac{1}{2} \cdot \frac{1}{4} = \frac{1}{8}$

These two events are statsically independent, because knowledge of A gives no additional knowledge of B.

3. a. $\frac{1}{4}$

b. $\frac{1}{13}$



4 a.

10kΩ	10kΩ	20kΩ	20kΩ	15kΩ
10kΩ	10kΩ	20kΩ	20kΩ	15kΩ
20kΩ	20Ω	20Ω	20kΩ	15kΩ

b. $8/15$
c. $7/15$