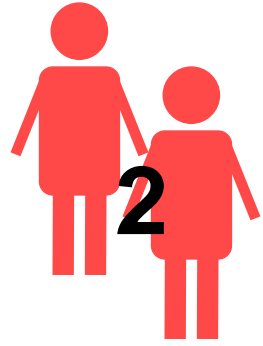
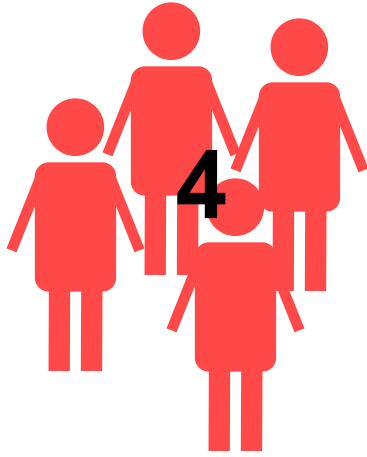
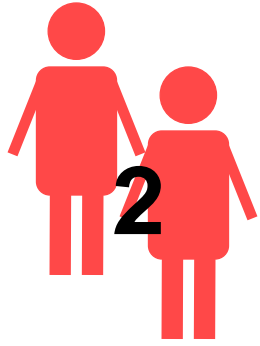


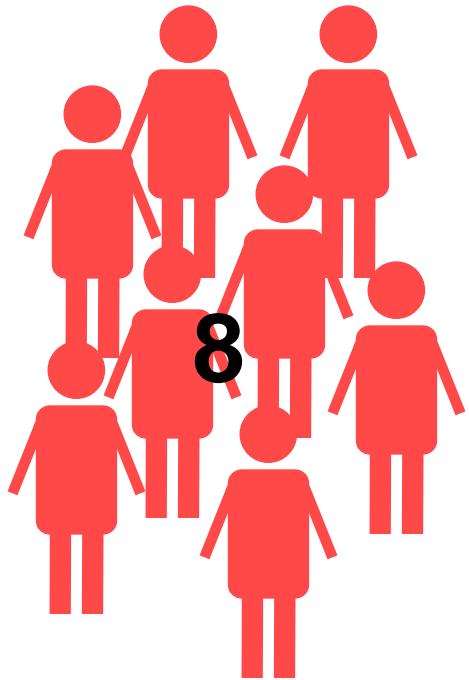
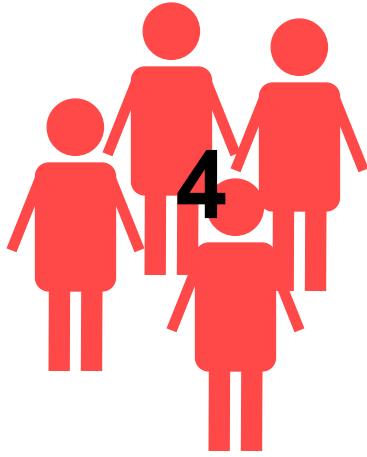
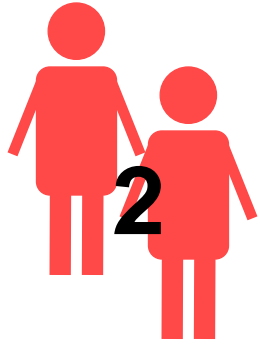
The Standing Disease

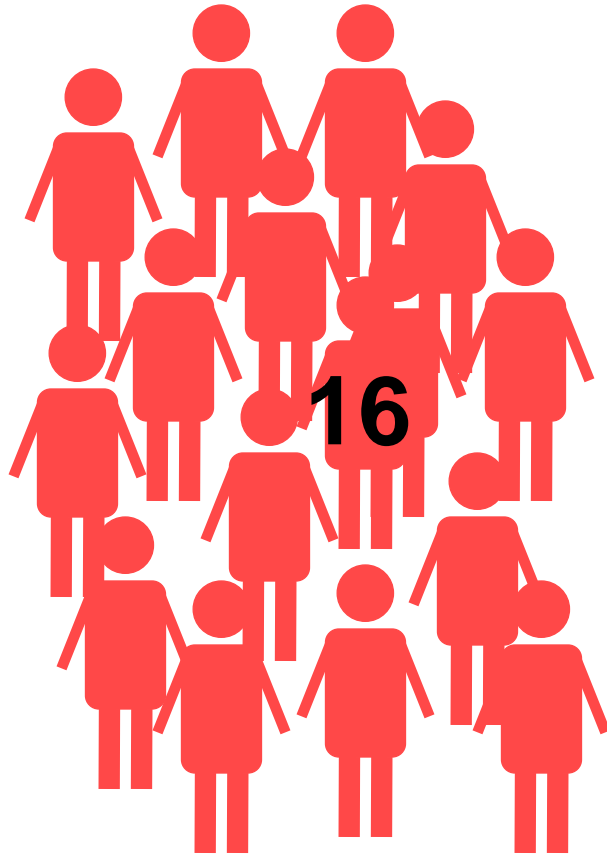
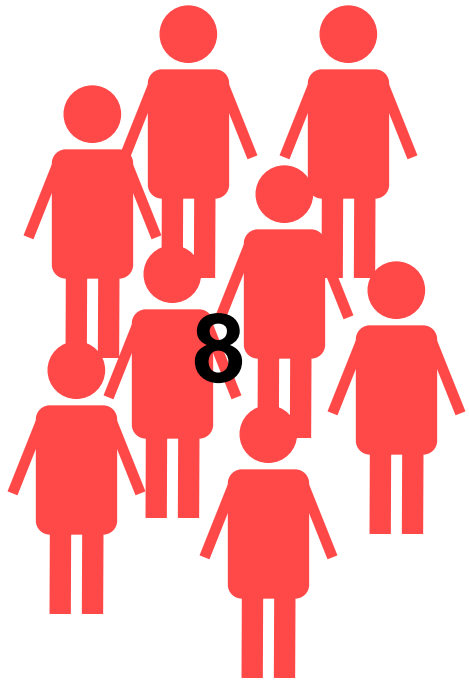
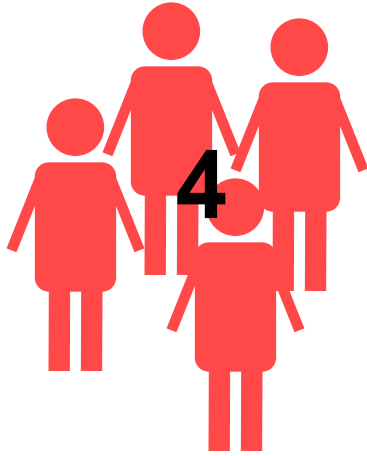
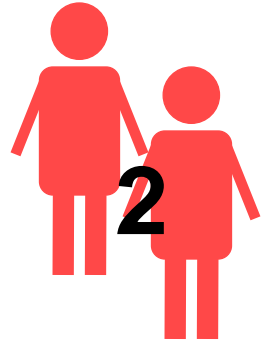






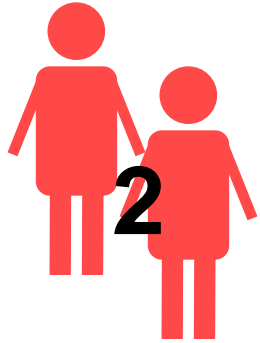




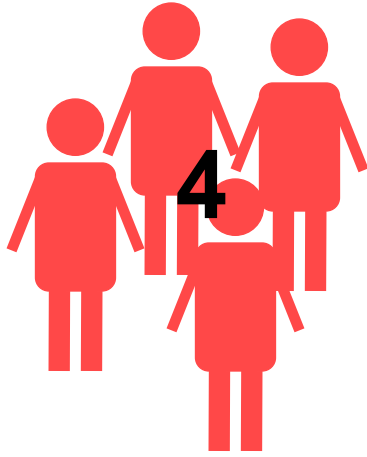




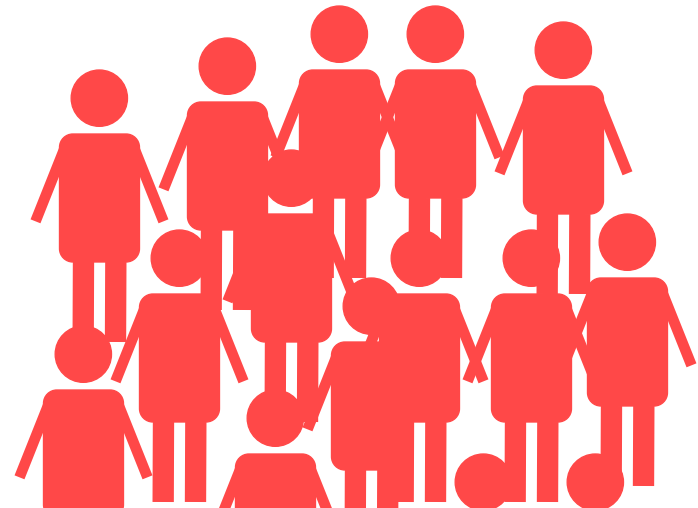
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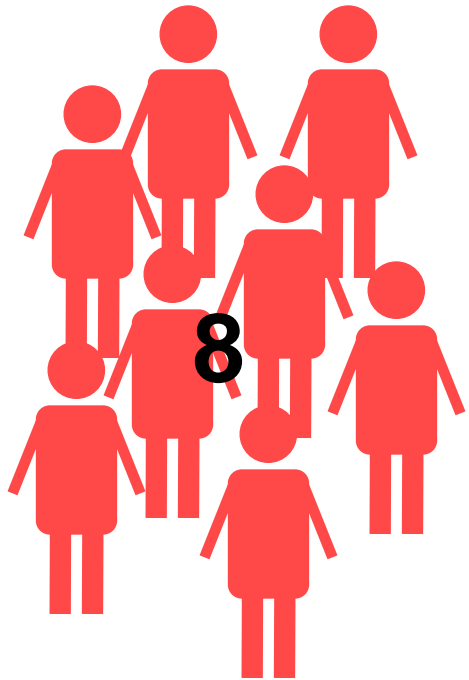
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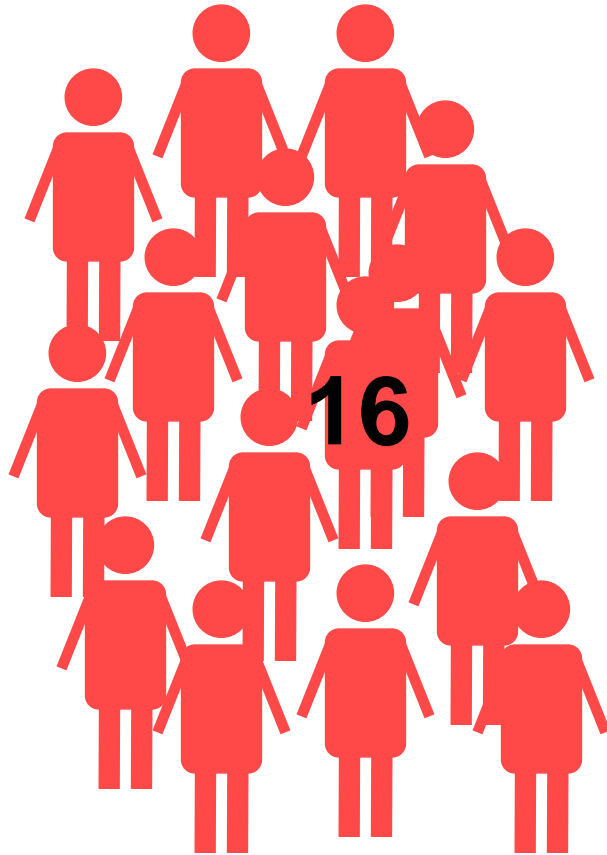
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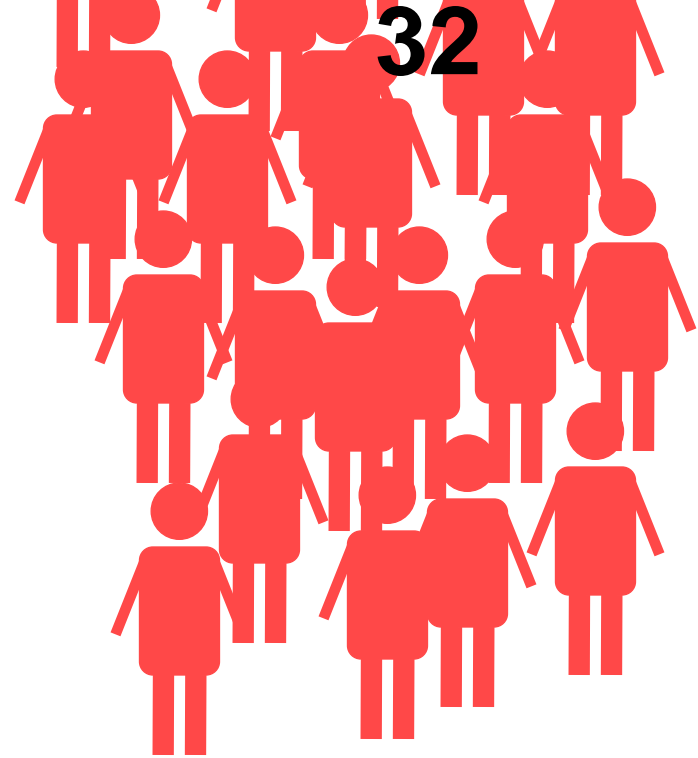
16



8

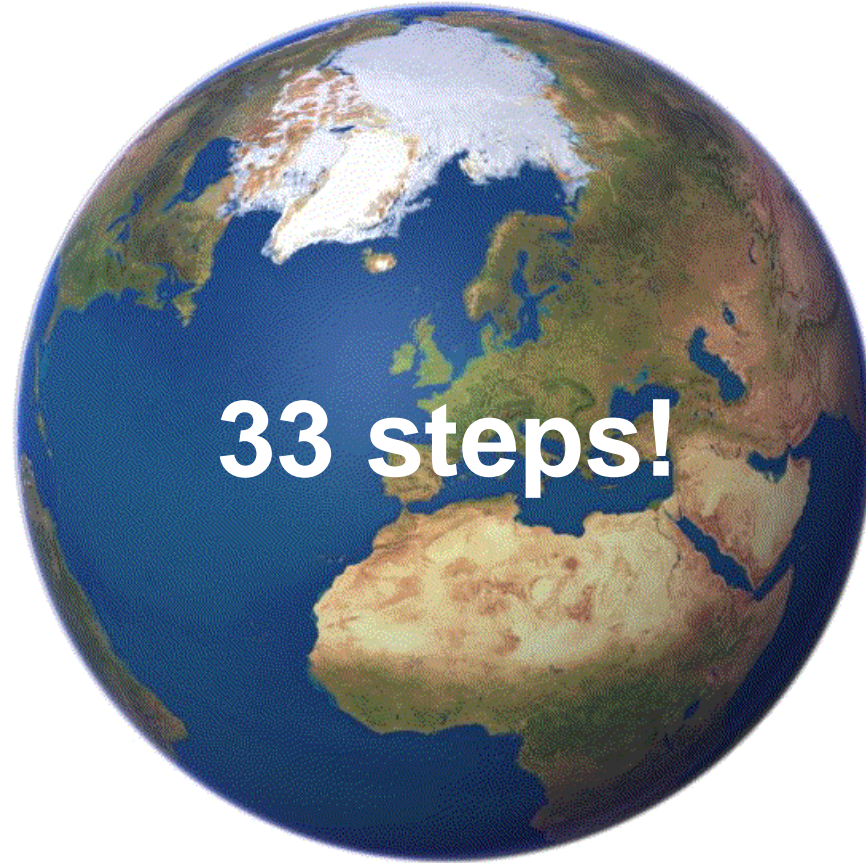


32



64

1	131,072
2	262,144
4	524,288
8	1,048,576
16	2,097,152
32	4,194,304
64	8,388,608
128	16,777,216
256	33,554,432
512	67,108,864
1,024	134,217,728
2,048	268,435,456
4,096	536,870,912
8,192	1,073,741,824
16,384	2,147,483,648
32,768	4,294,967,296
65,536	8,589,934,592

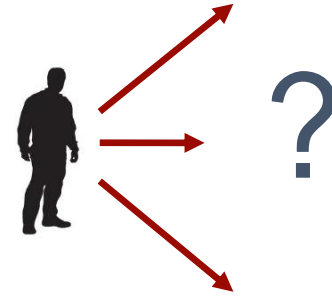


33 steps!

“Eyebrows were raised when the Centers for Disease Control’s model forecast **77 trillion cases** if the epidemic went unchecked”

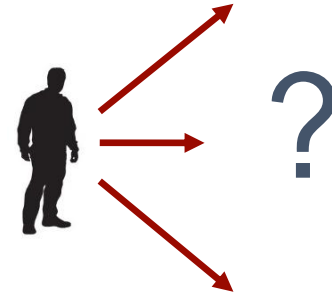
– Ben Cooper, 2006

Reproduction number (R_0)



Definition: Average number of people an infected person infects at the start of an epidemic

Reproduction number (R_0)

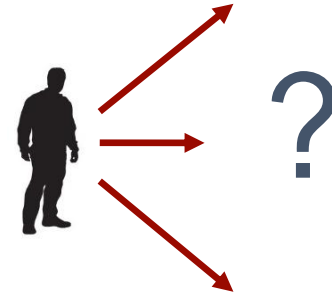


Definition: Average number of people an infected person infects at the start of an epidemic



$$R_0=2$$

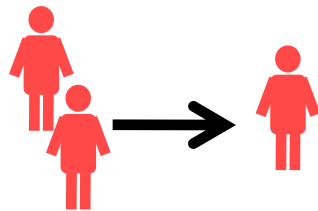
Reproduction number (R_0)



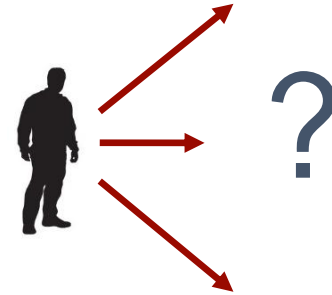
R_0 measures how quickly an epidemic will take off...

$$R_0 < 1$$

Cases **decrease** each step



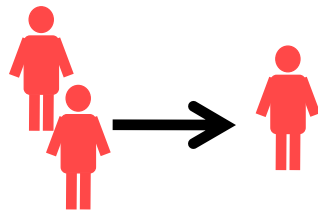
Reproduction number (R_0)



R_0 measures how quickly an epidemic will take off...

$$R_0 < 1$$

Cases **decrease** each step



$$R_0 > 1$$

Cases **increase** each step

