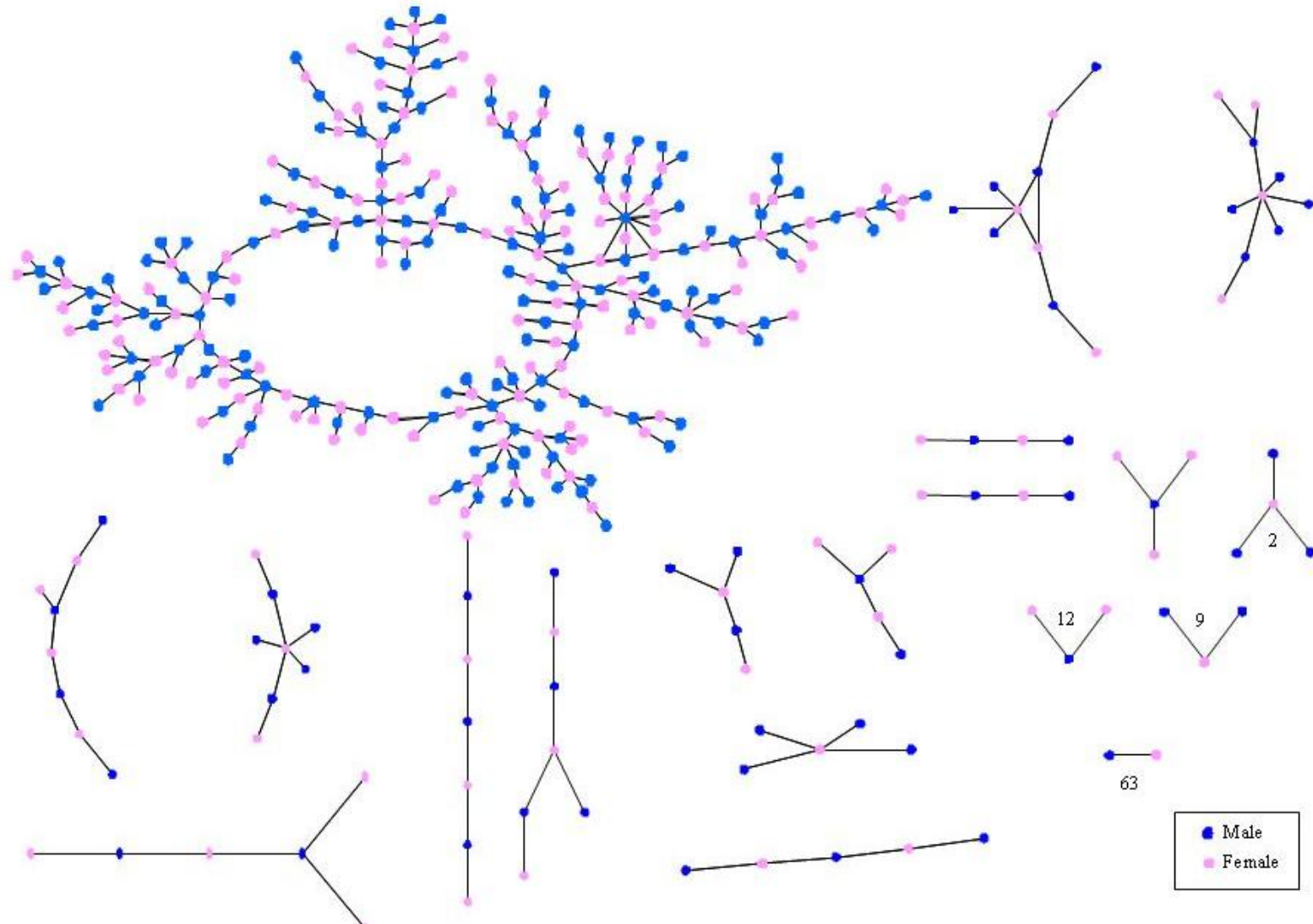
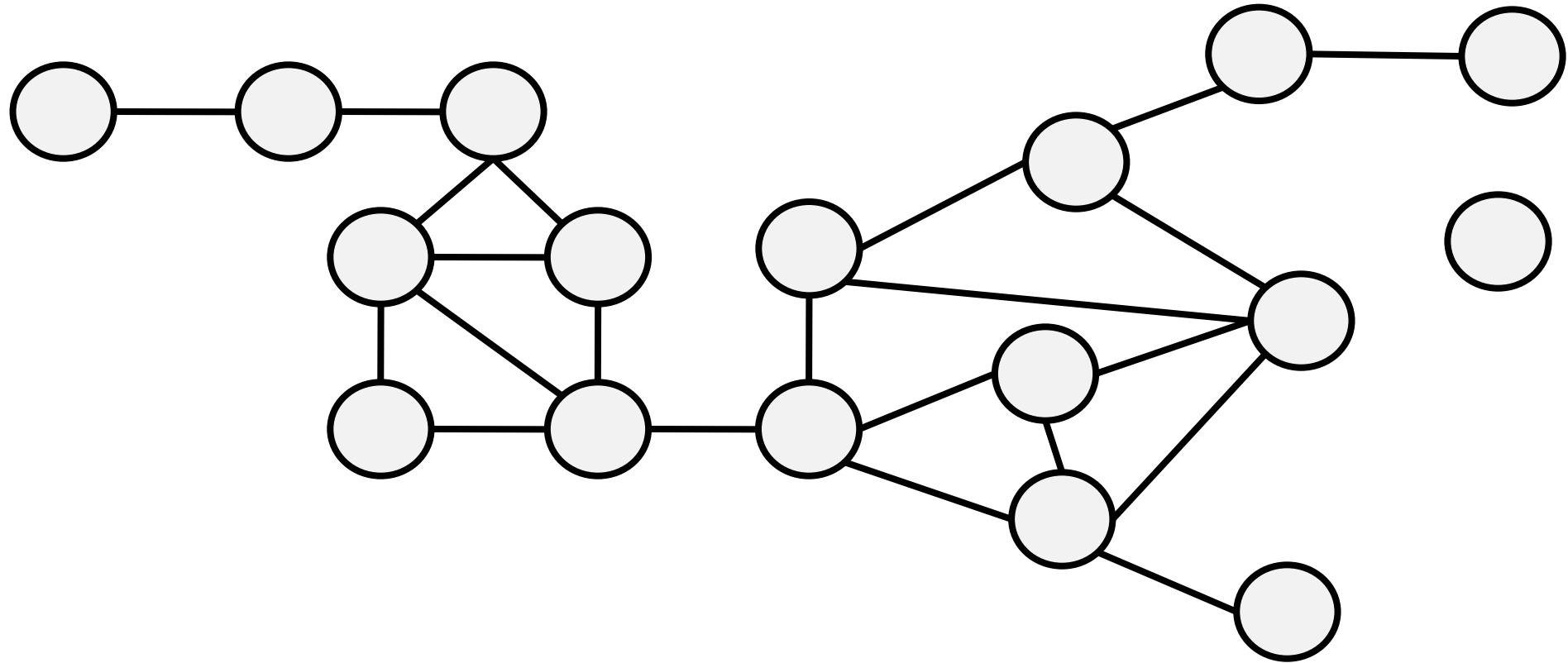


Epidemics on Networks

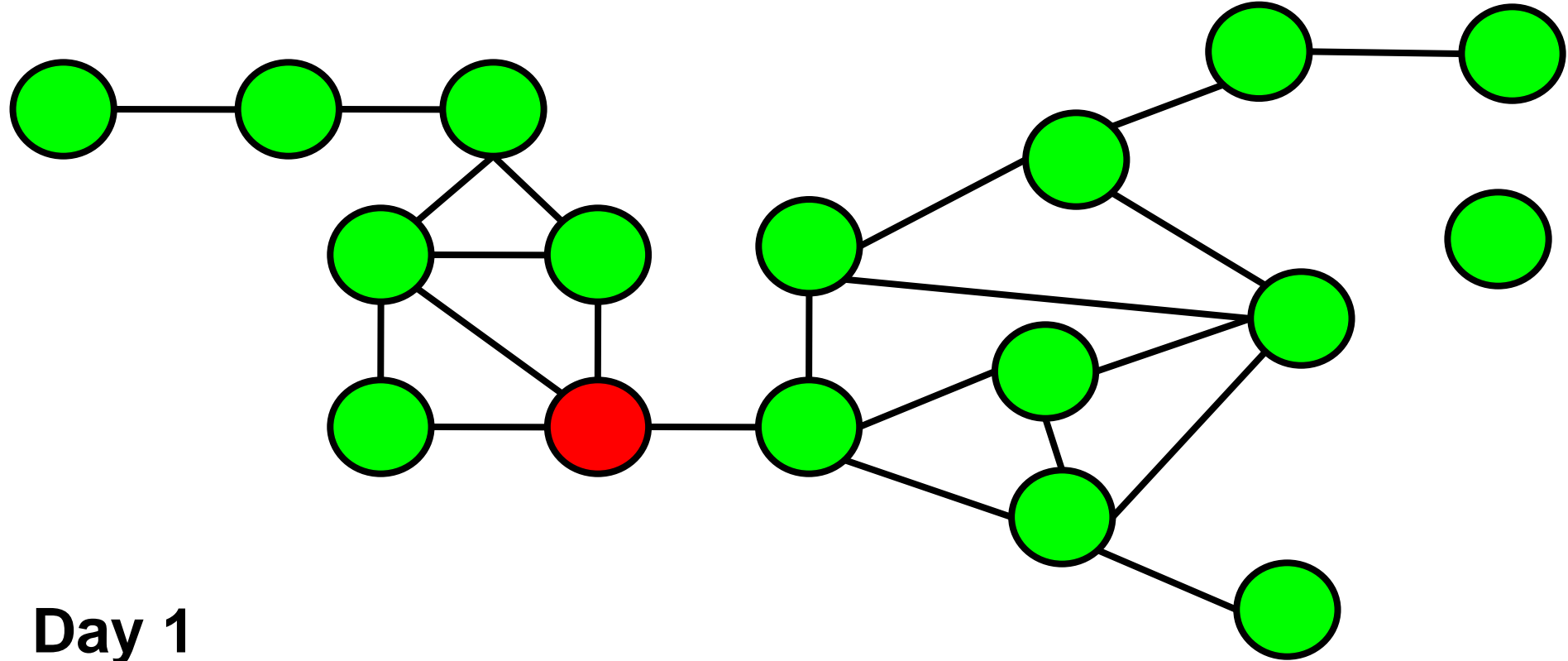
Romantic network in US high school



How does an epidemic spread on a network?



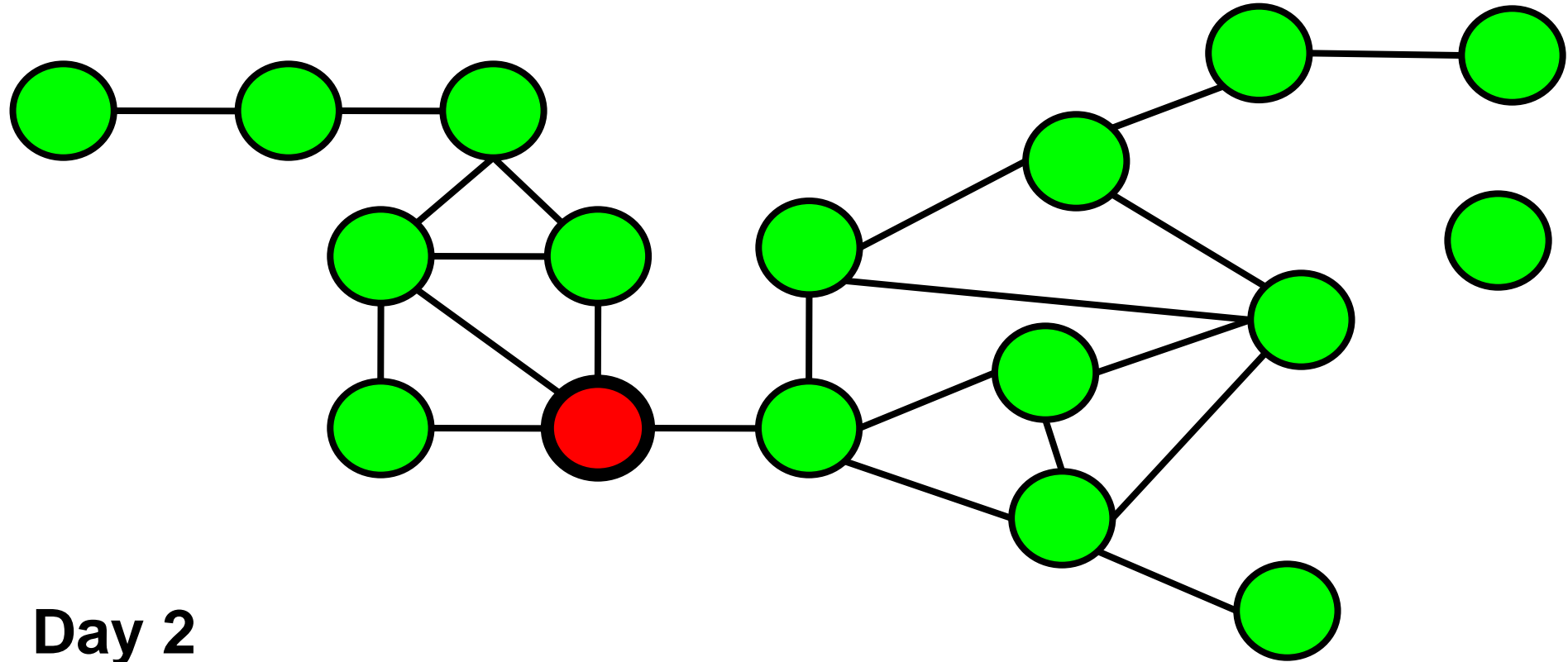
How does an epidemic spread on a network?



Day 1

Everyone starts off **susceptible**, apart from one **infected** person

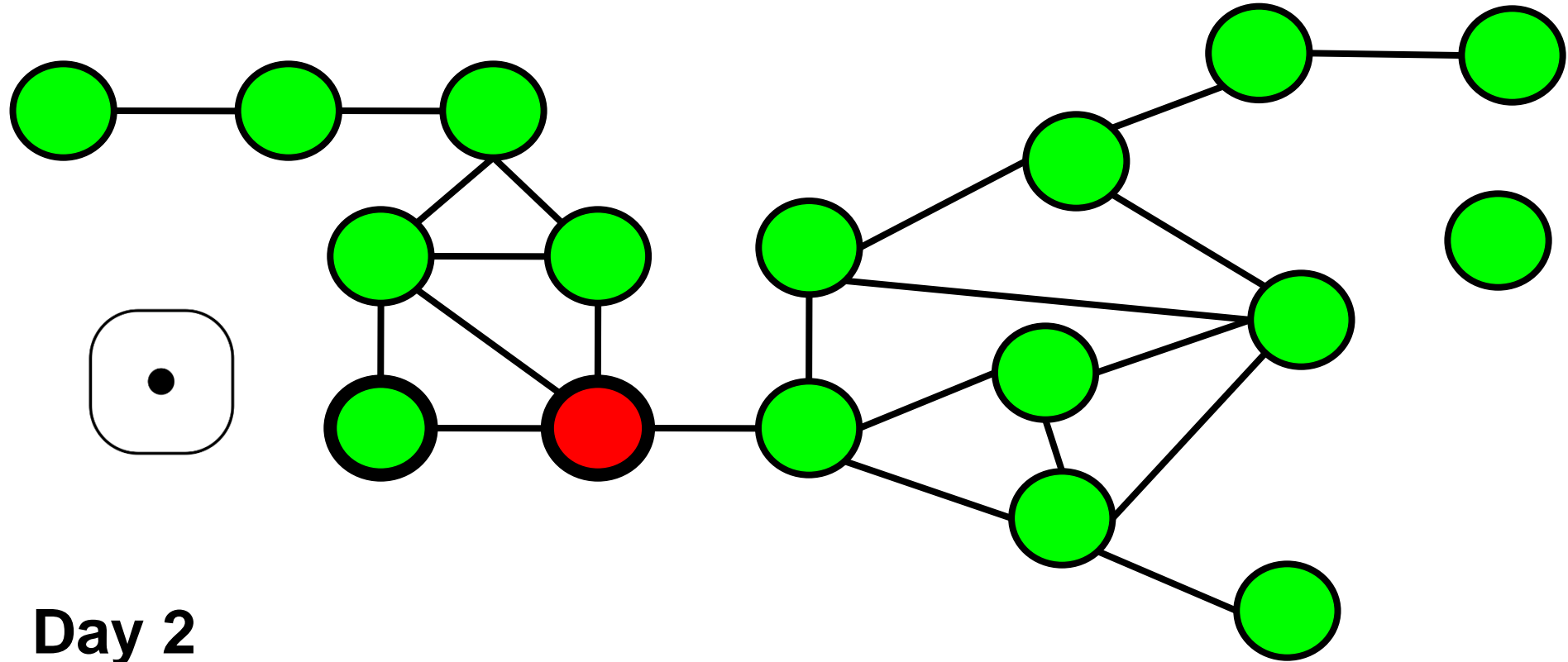
How does an epidemic spread on a network?



Day 2

- Go round infected person's contacts in turn

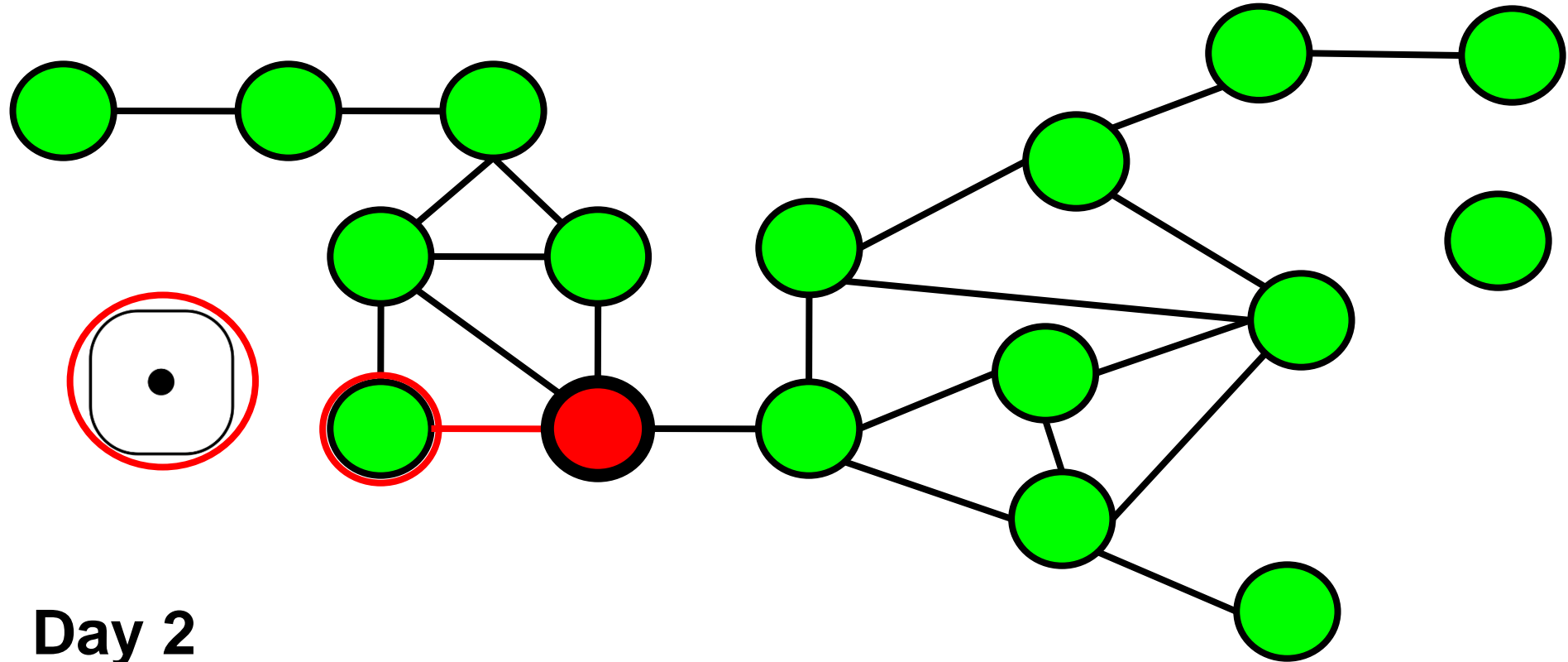
How does an epidemic spread on a network?



Day 2

- Go round infected person's contacts in turn
- Roll dice. If number is 1 or 2, infect that person

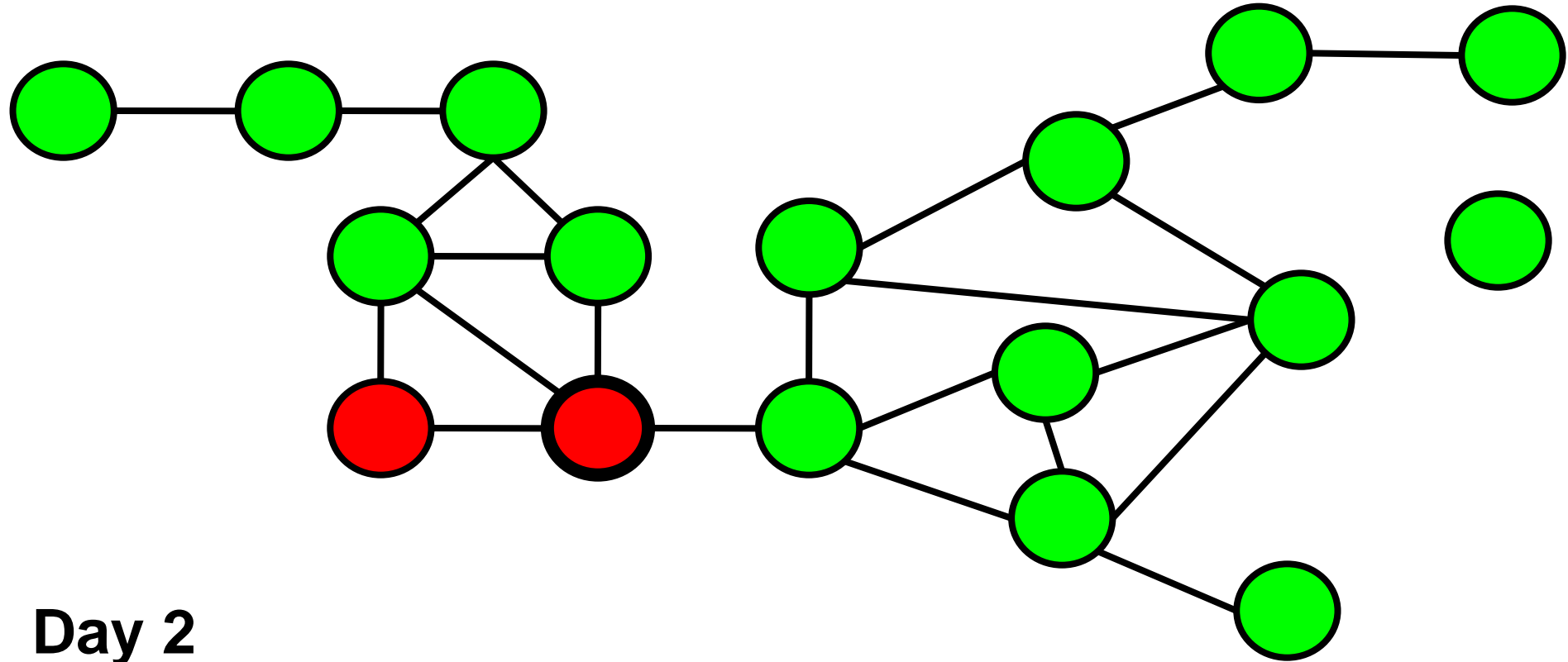
How does an epidemic spread on a network?



Day 2

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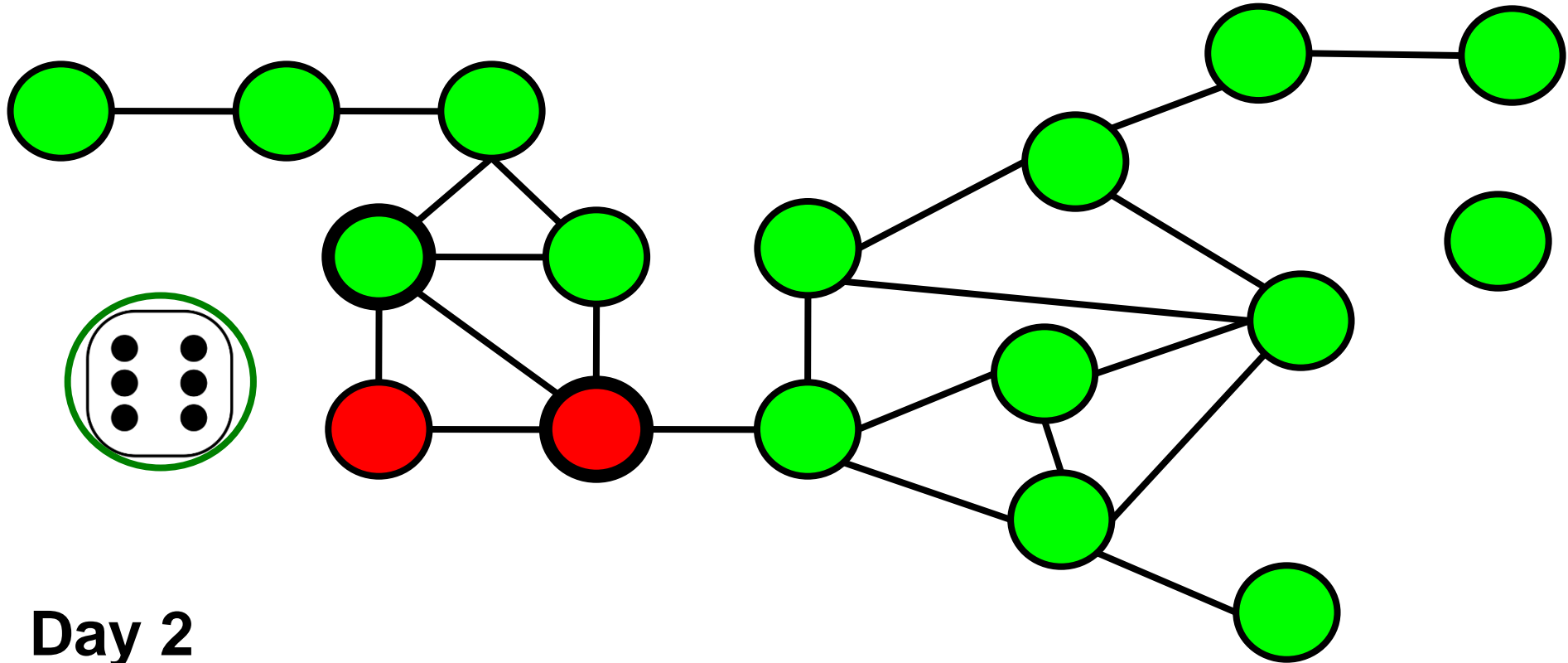
How does an epidemic spread on a network?



Day 2

- Go round infected person's contacts in turn
- Roll dice. If number is 1 or 2, infect that person
- Continue for all contacts

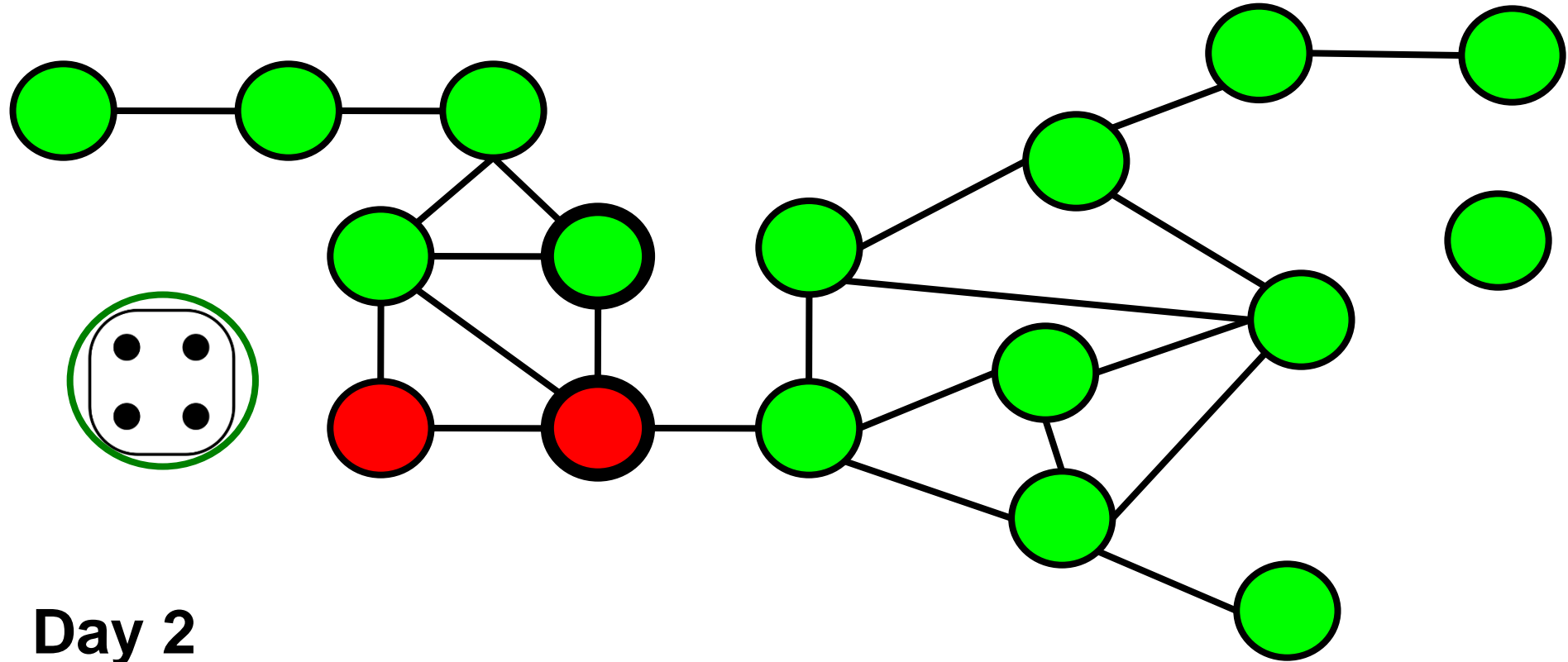
How does an epidemic spread on a network?



Day 2

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- Continue for all contacts

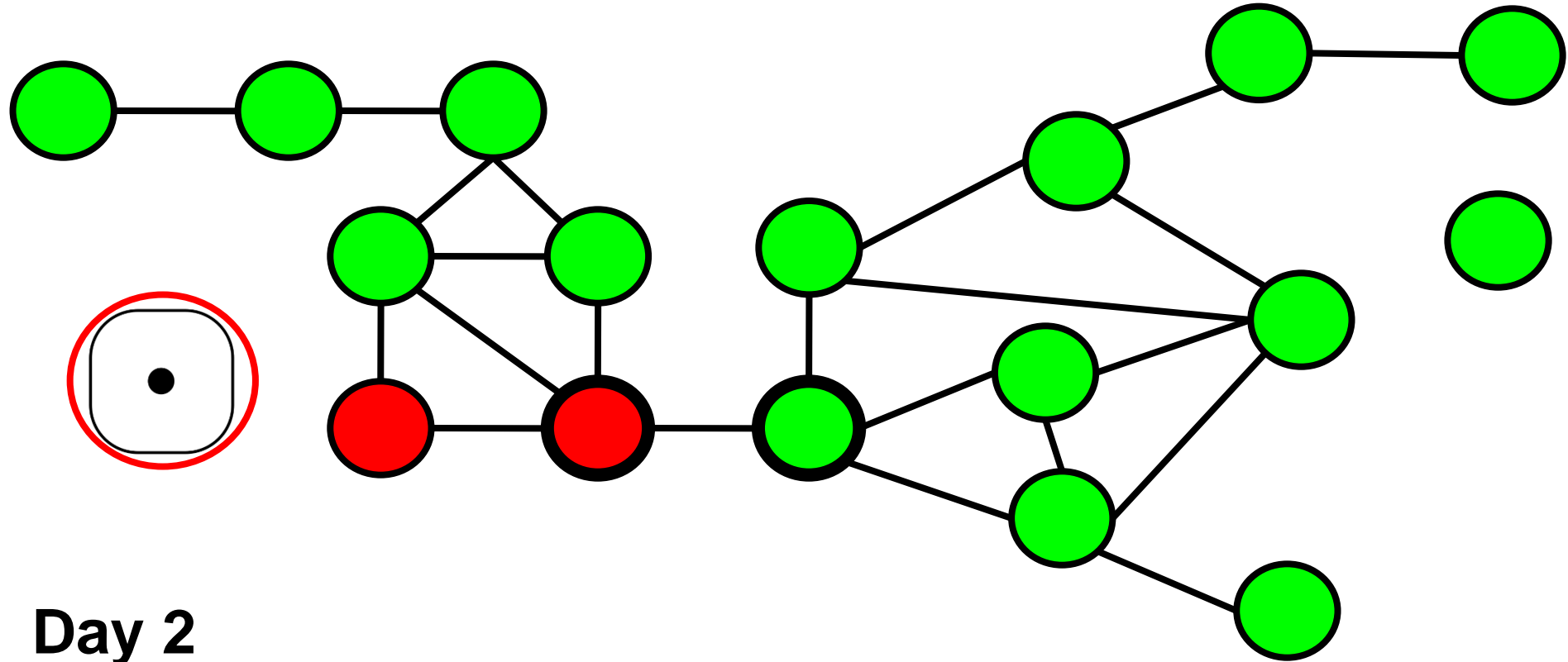
How does an epidemic spread on a network?



Day 2

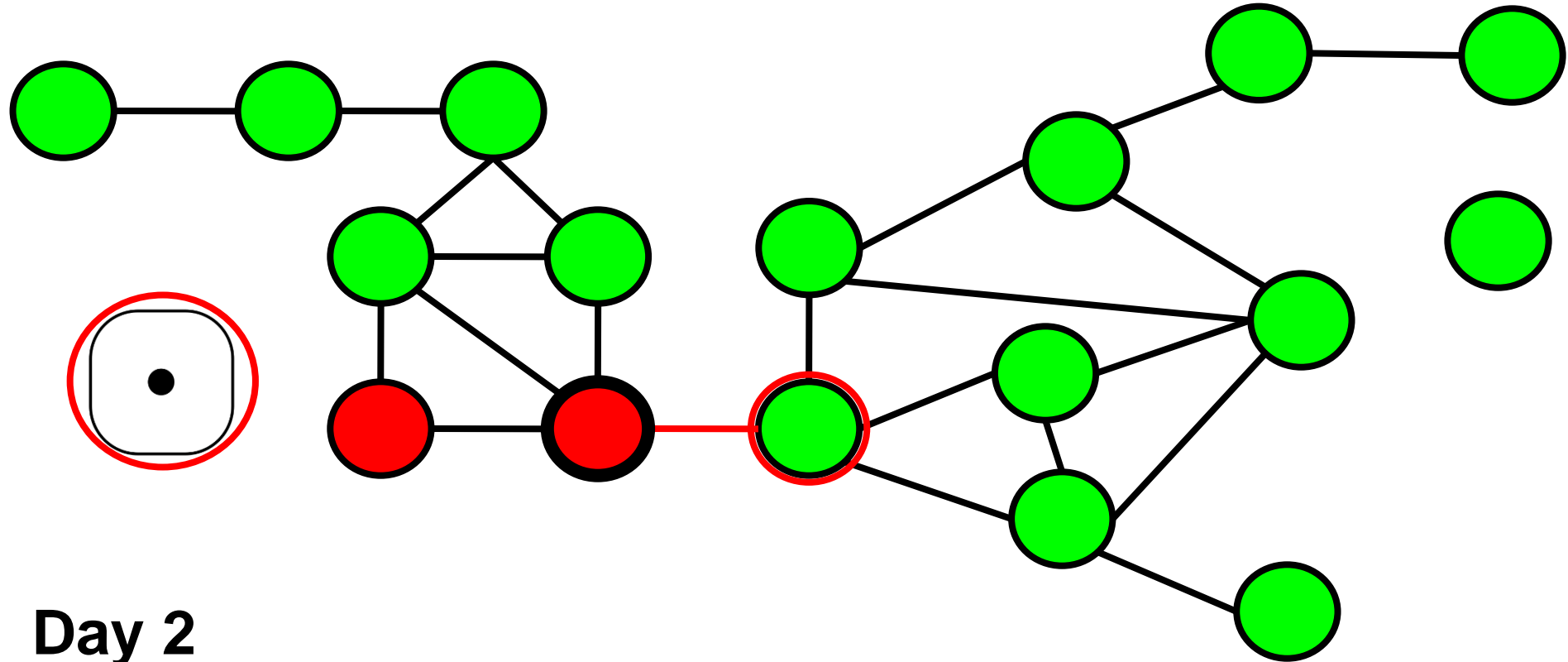
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How does an epidemic spread on a network?



- Go round infected person's contacts in turn
- Roll dice. If number is 1 or 2, infect that person
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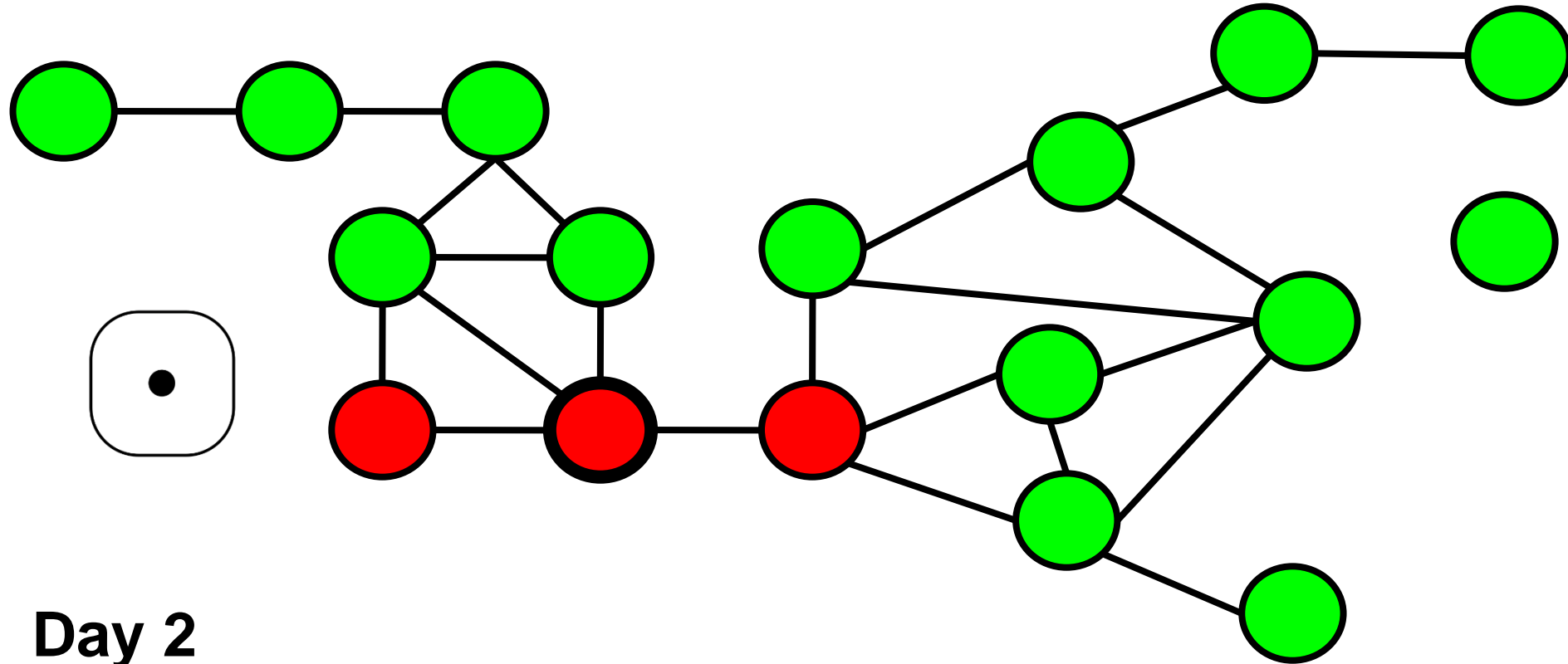
How does an epidemic spread on a network?



Day 2

- Go round infected person's contacts in turn
- Roll dice. If number is 1 or 2, infect that person
- Continue for all contacts

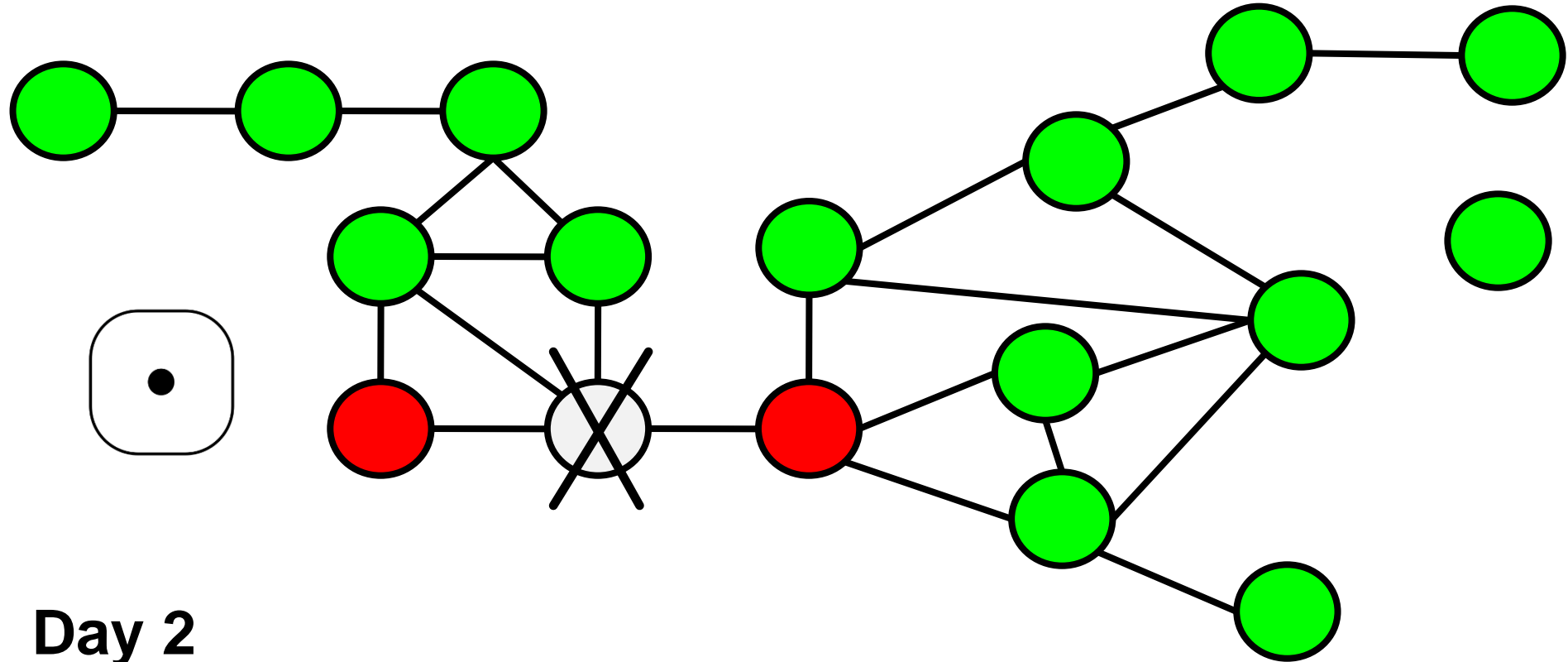
How does an epidemic spread on a network?



Day 2

- Go round infected person's contacts in turn
- Roll dice. If number is 1 or 2, infect that person
- Continue for all contacts, then infected person recovers

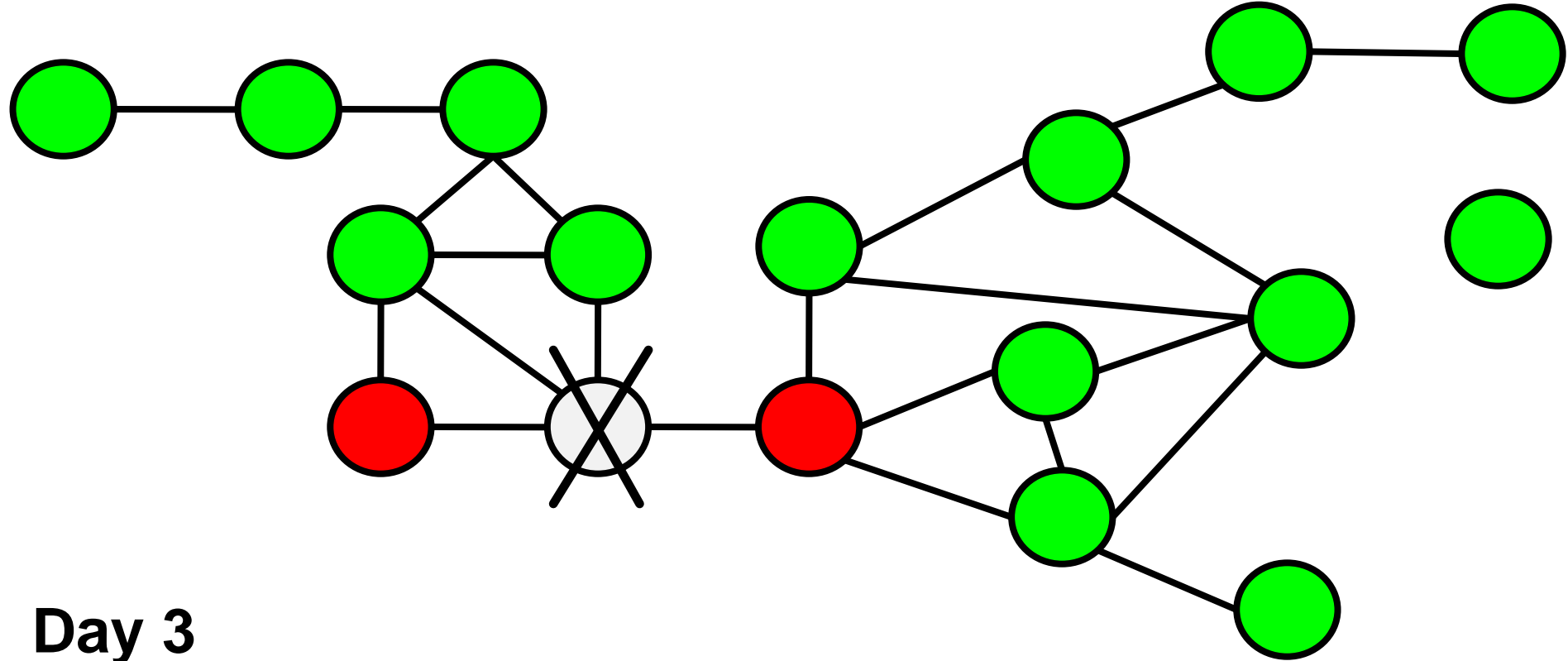
How does an epidemic spread on a network?



Day 2

- Go round infected person's contacts in turn
- Roll dice. If number is 1 or 2, infect that person
- Continue for all contacts, then infected person recovers

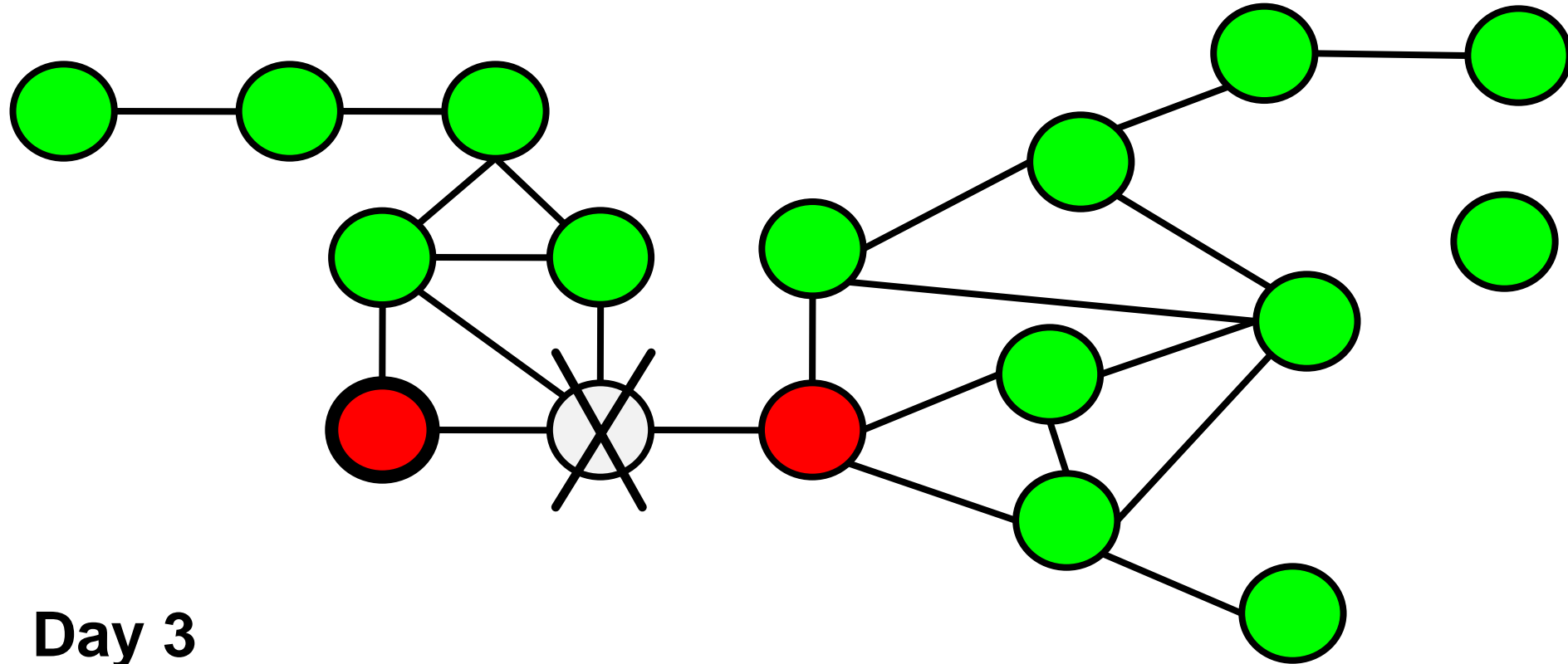
How does an epidemic spread on a network?



Day 3

- Start with two infected people
- For each infected person, roll dice for each contact

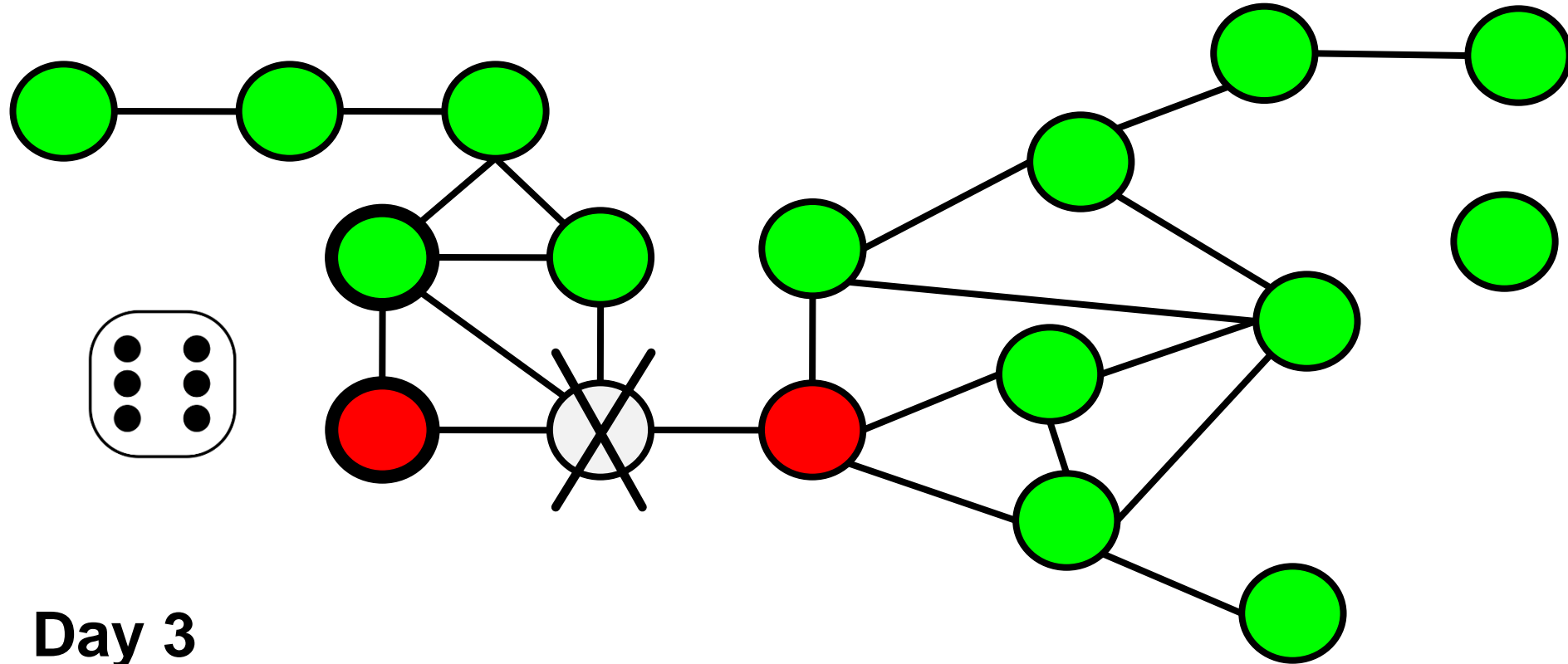
How does an epidemic spread on a network?



Day 3

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- For each infected person, roll dice for each contact

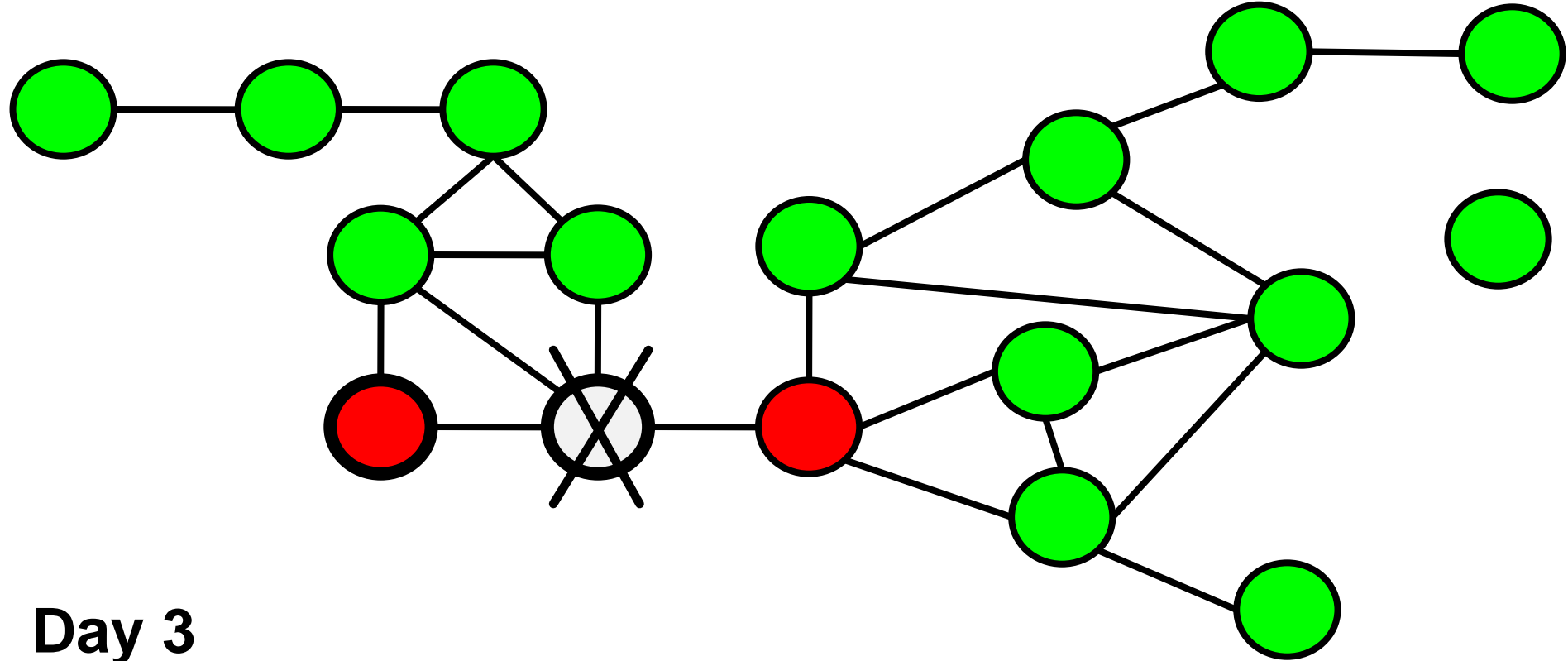
How does an epidemic spread on a network?



Day 3

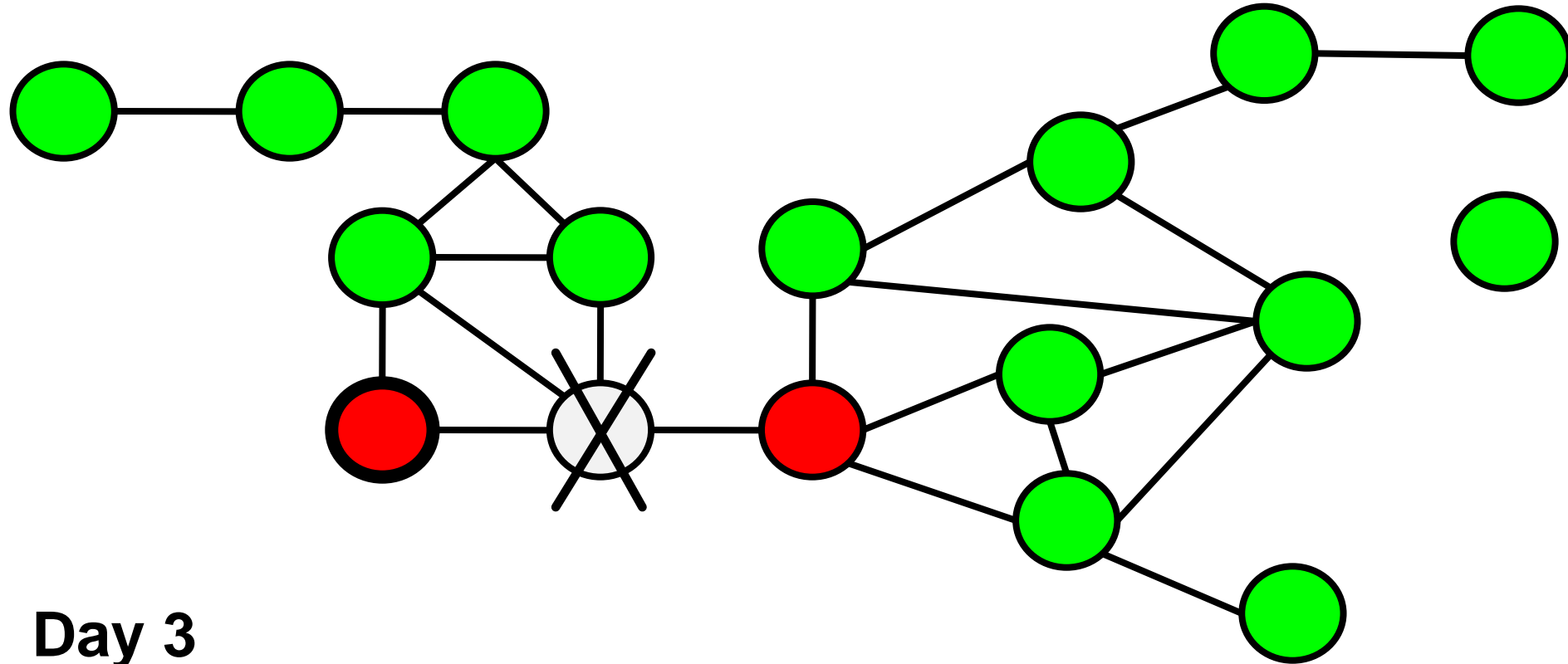
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How does an epidemic spread on a network?



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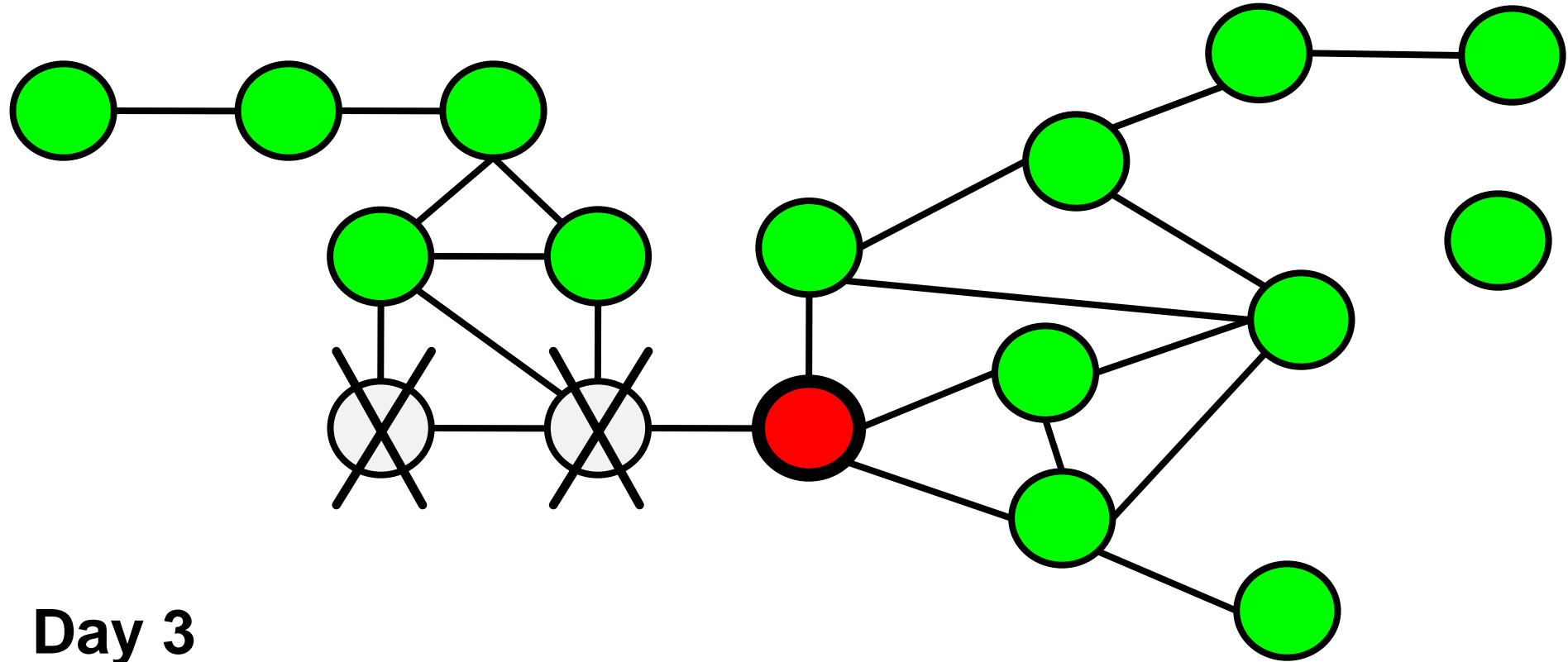
How does an epidemic spread on a network?



Day 3

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- For each infected person, roll dice for each contact

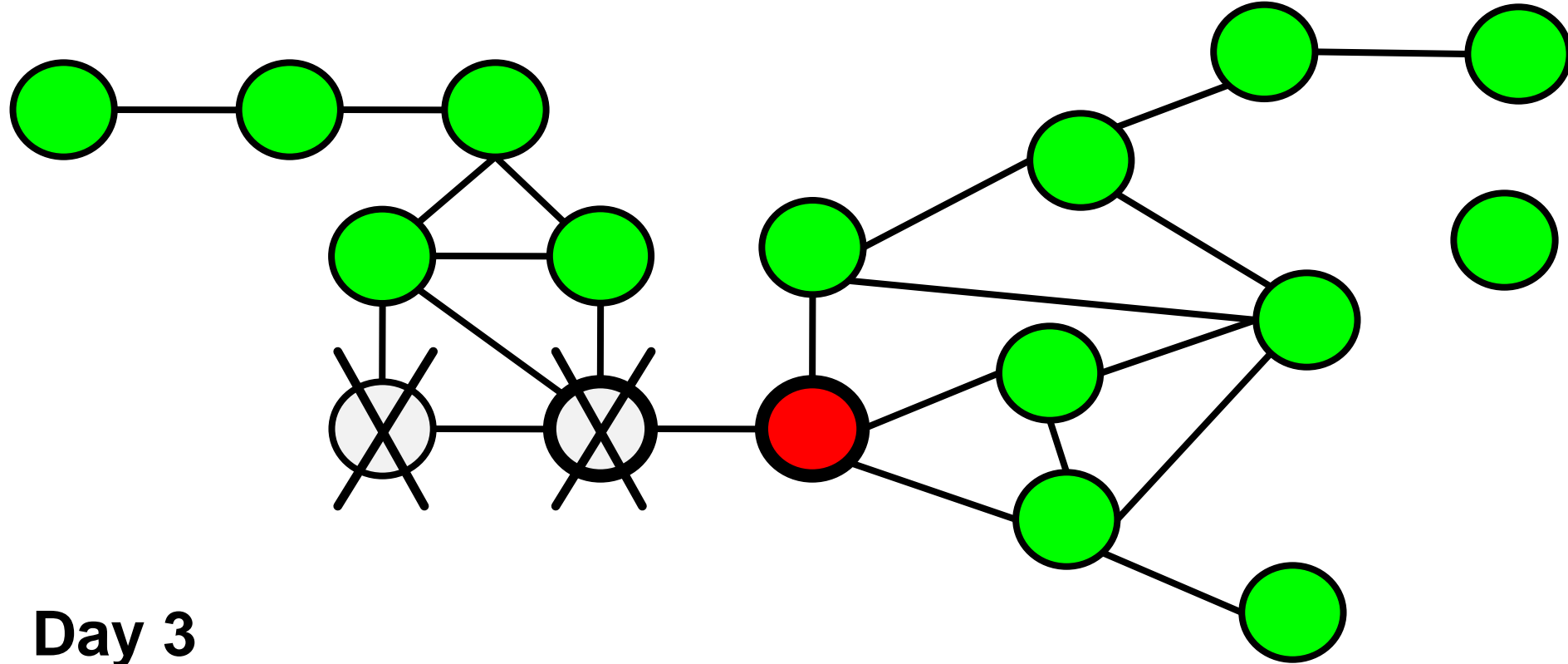
How does an epidemic spread on a network?



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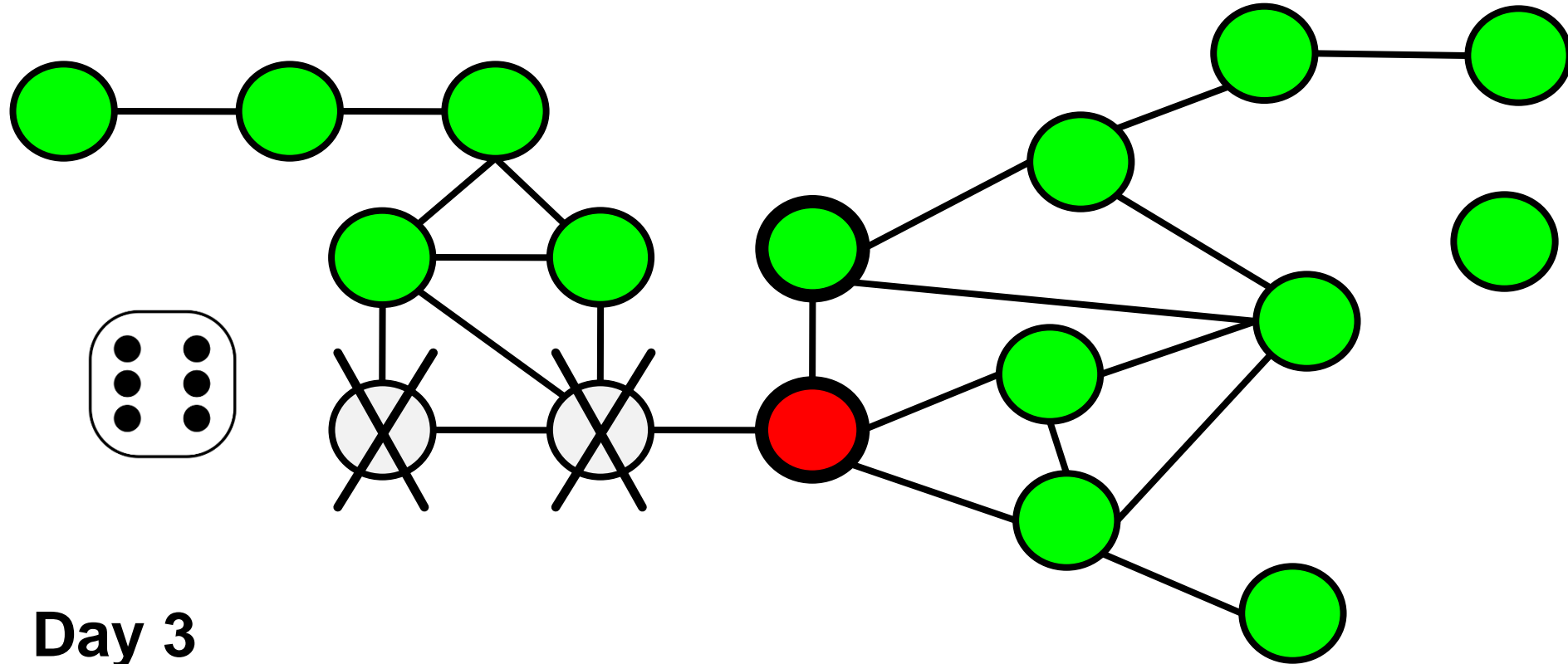
How does an epidemic spread on a network?



Day 3

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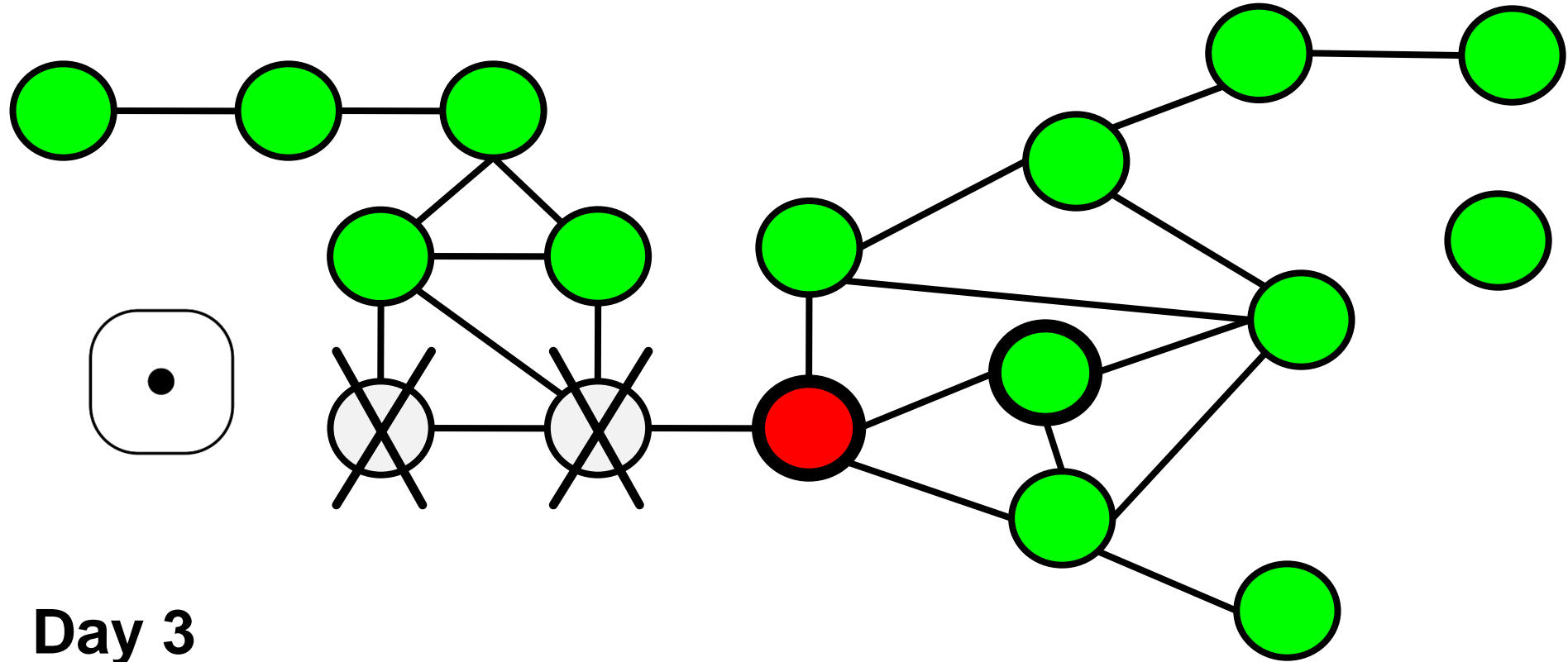
How does an epidemic spread on a network?



Day 3

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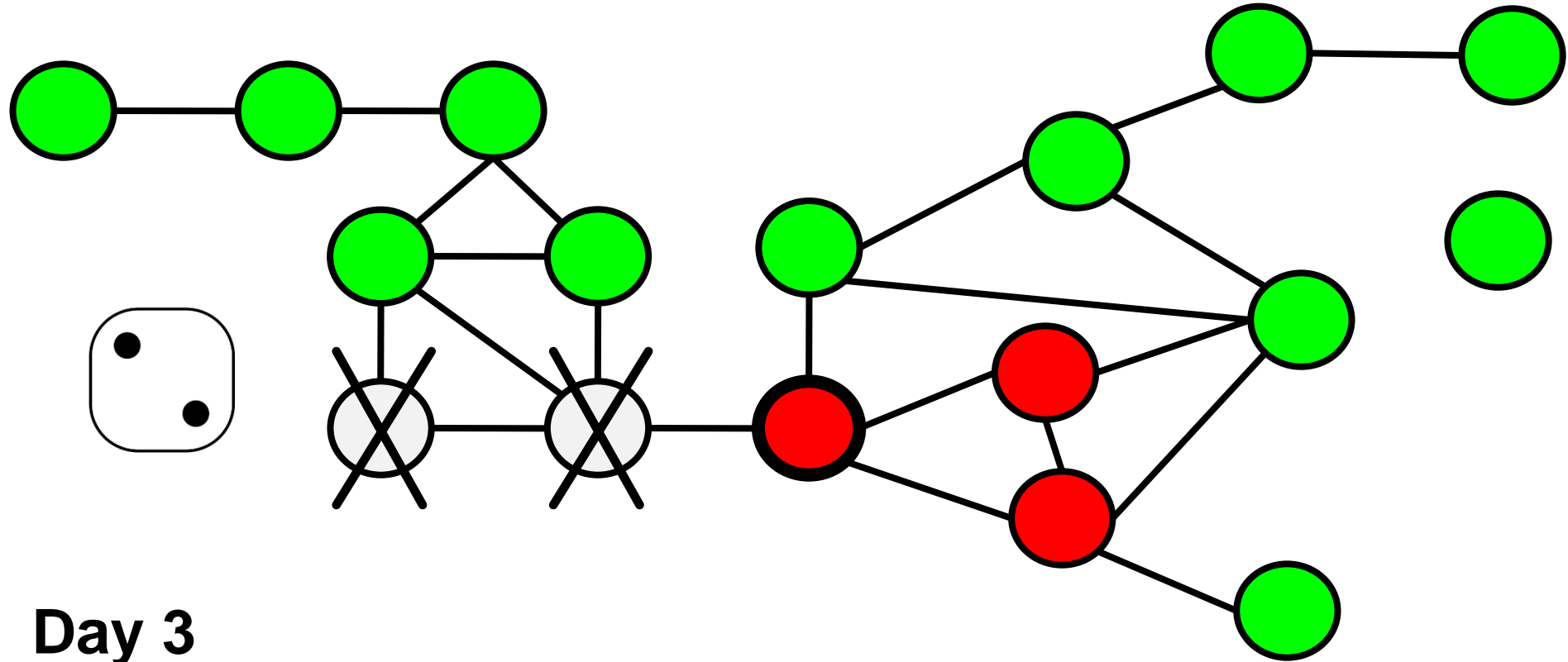
How does an epidemic spread on a network?



Day 3

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- For each infected person, roll dice for each contact

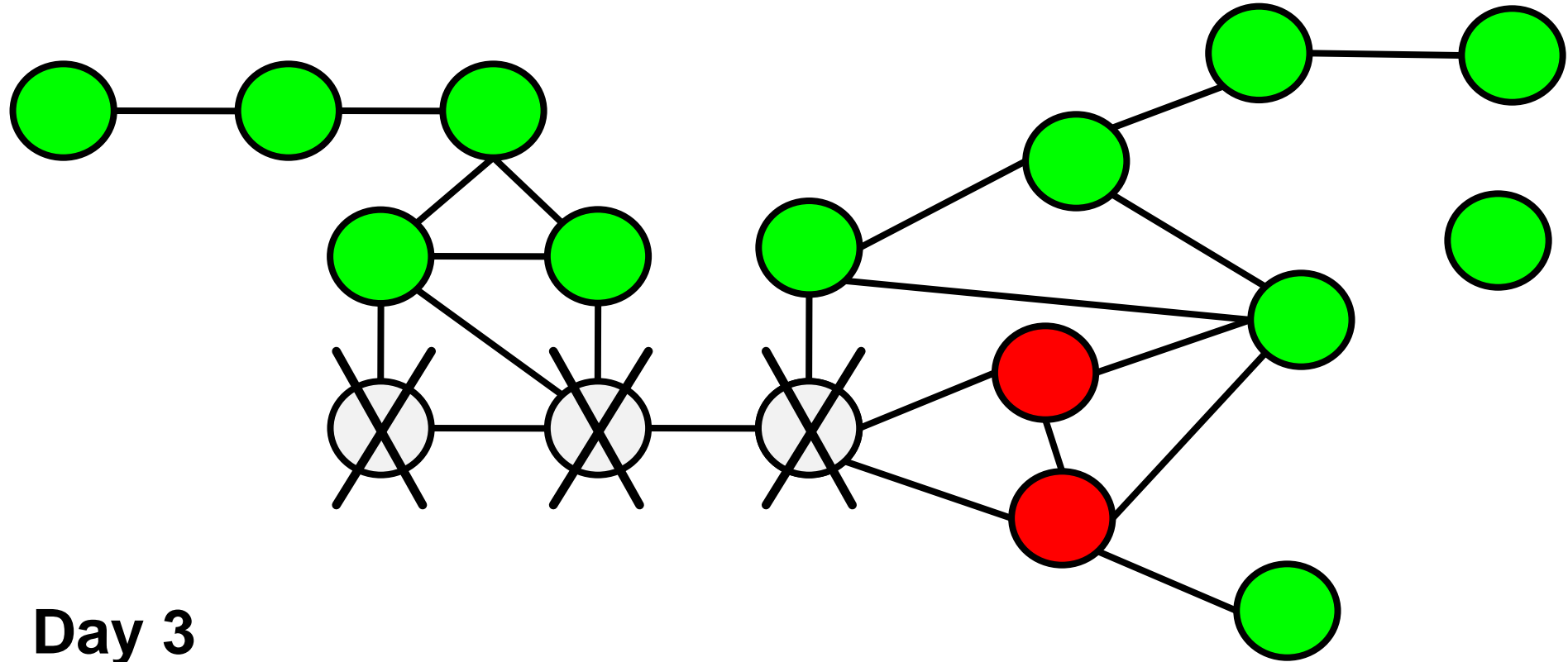
How does an epidemic spread on a network?



Day 3

- Start with two infected people
- For each infected person, roll dice for each contact

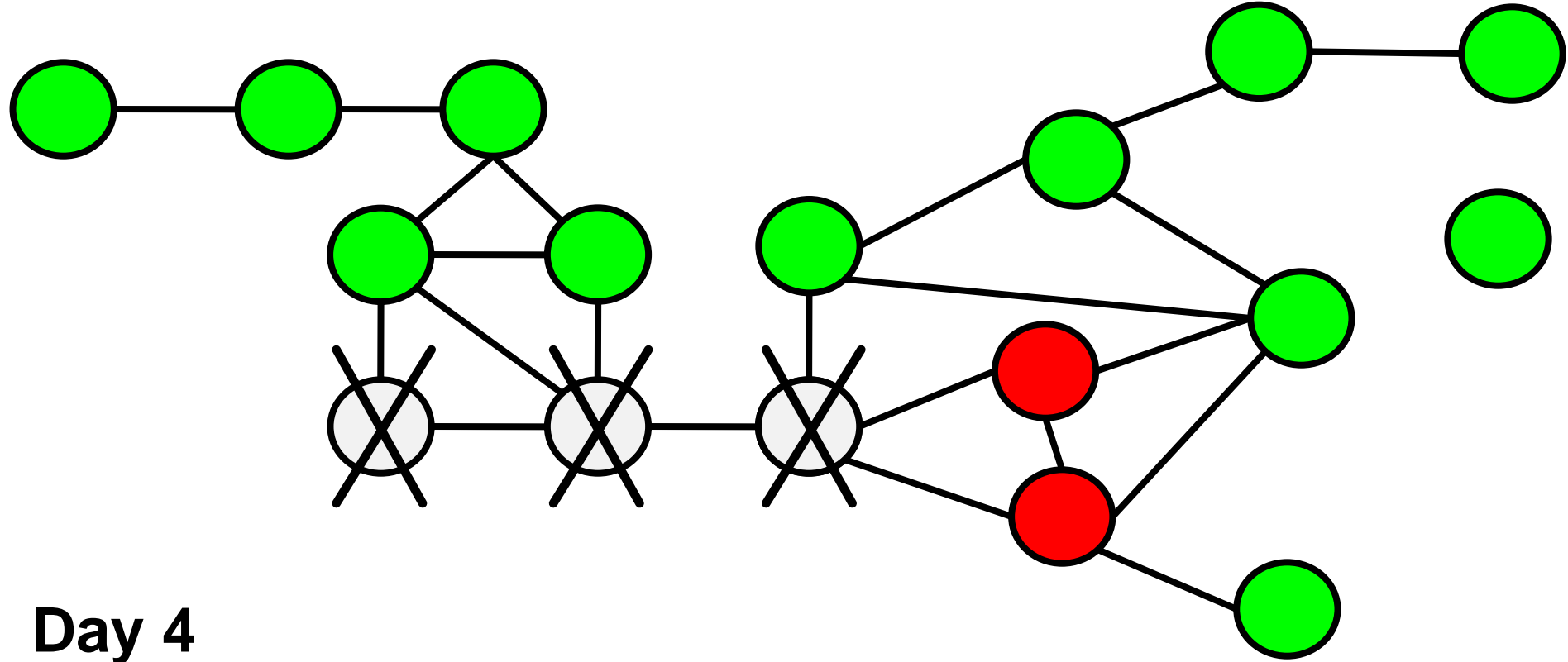
How does an epidemic spread on a network?



Day 3

- Start with two infected people
- For each infected person, roll dice for each contact

How does an epidemic spread on a network?



Day 4

- Start with two infected people
- Continue until epidemic ends