Abstraction

Focusing on the information I need while ignoring the unnecessary details

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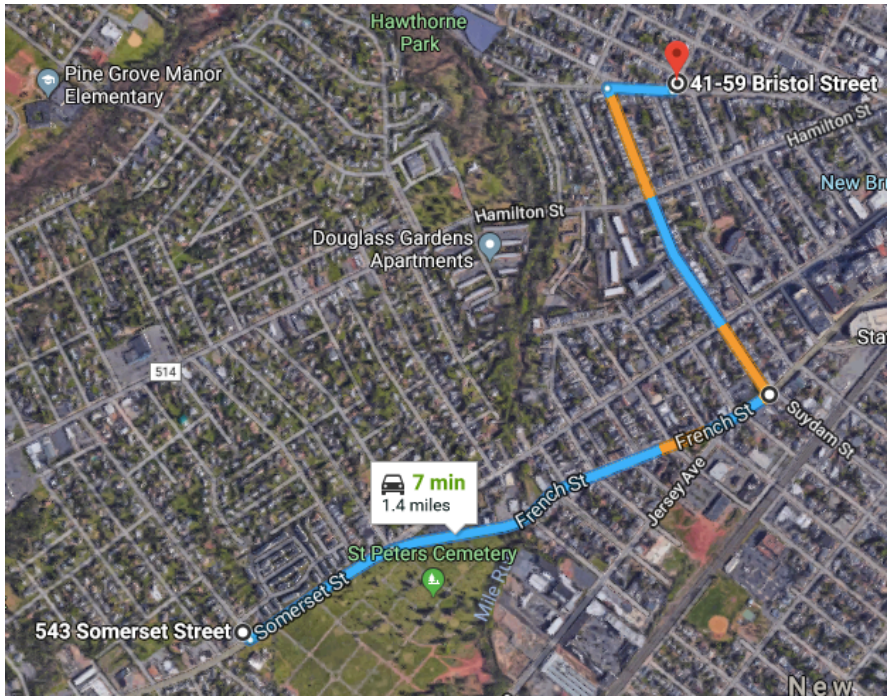
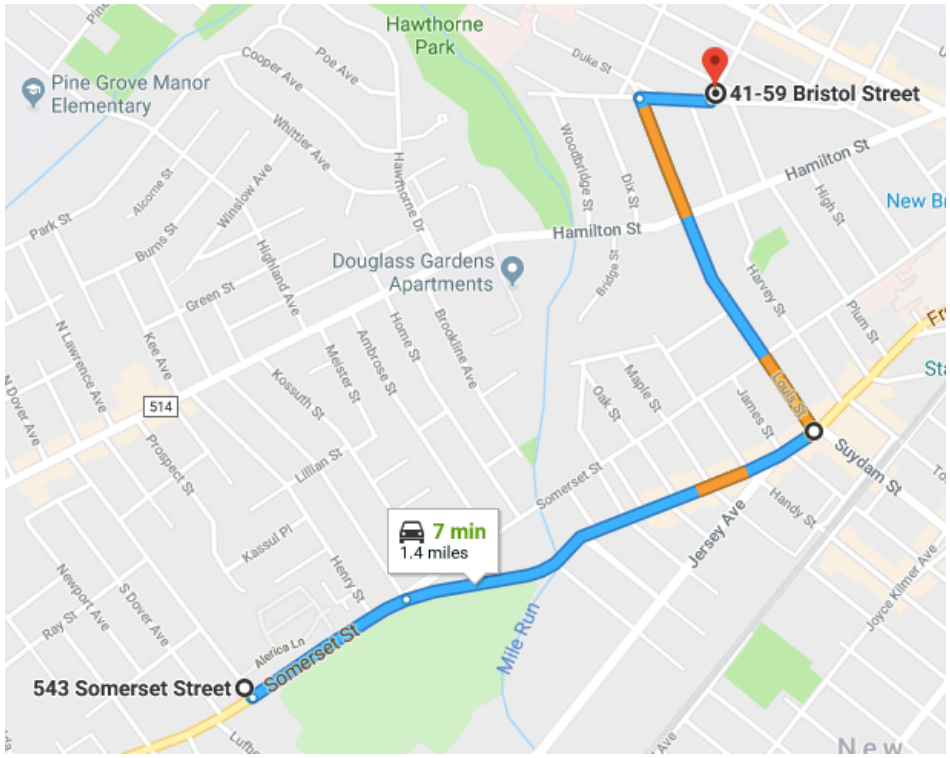
How can I travel by bus from point A to point B?





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Abstraction

- How can I simplify this problem?
- What is the most important information?
- What information can I ignore?
- How can I show only the important information?

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Decomposition

Breaking something down into smaller, more manageable parts

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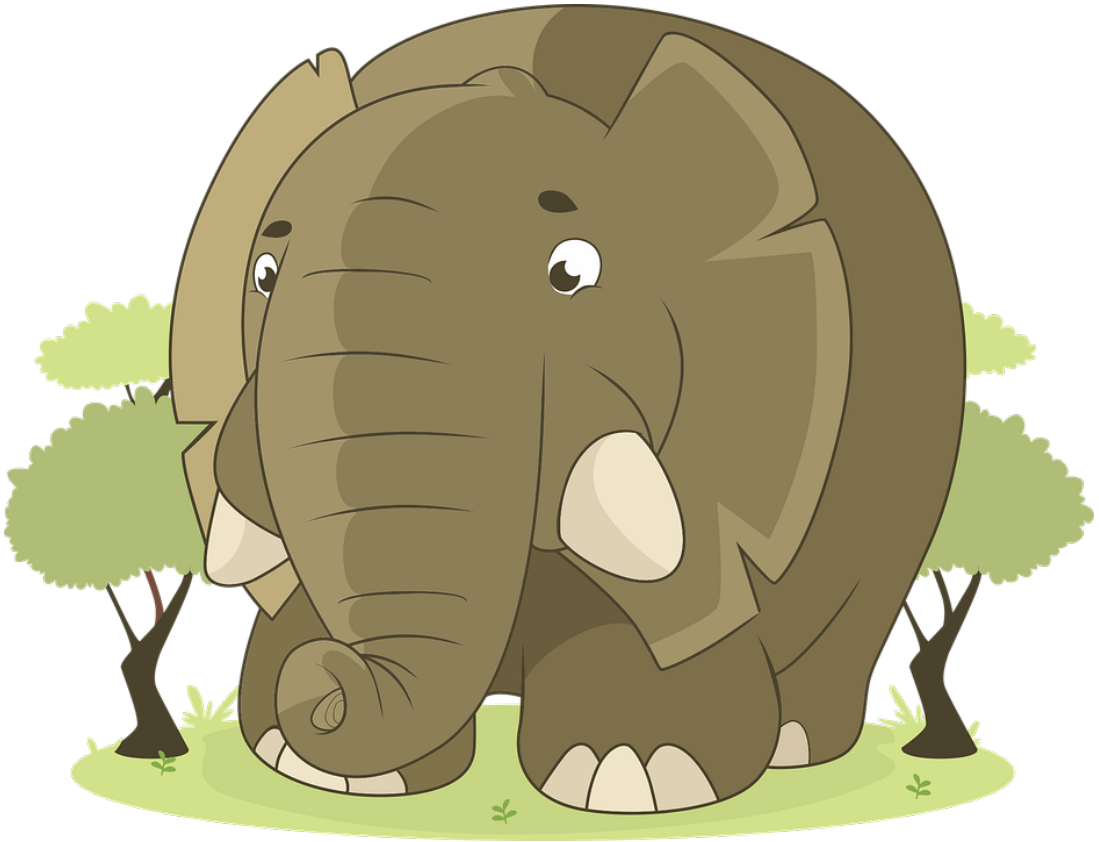
Q. How do you eat a whole elephant?



A. one bite at a time

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Decomposition

- What is the big problem I am trying to solve?
- What are the different ways I could break this down?
- What parts are easy? What parts are difficult?
- What steps can I take to solve this?

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Debugging

Finding and fixing errors or mistakes

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Can you find the the **mistake**?

1 2 3 4 5 6 7 8 9

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Debugging

- How can I tell whether or not my plan, model, or solution worked?
- How can I change something to solve my problem?
- Did the result match what I expected?
- Why didn't this work?

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Patterns

Looking for similarities or patterns between things

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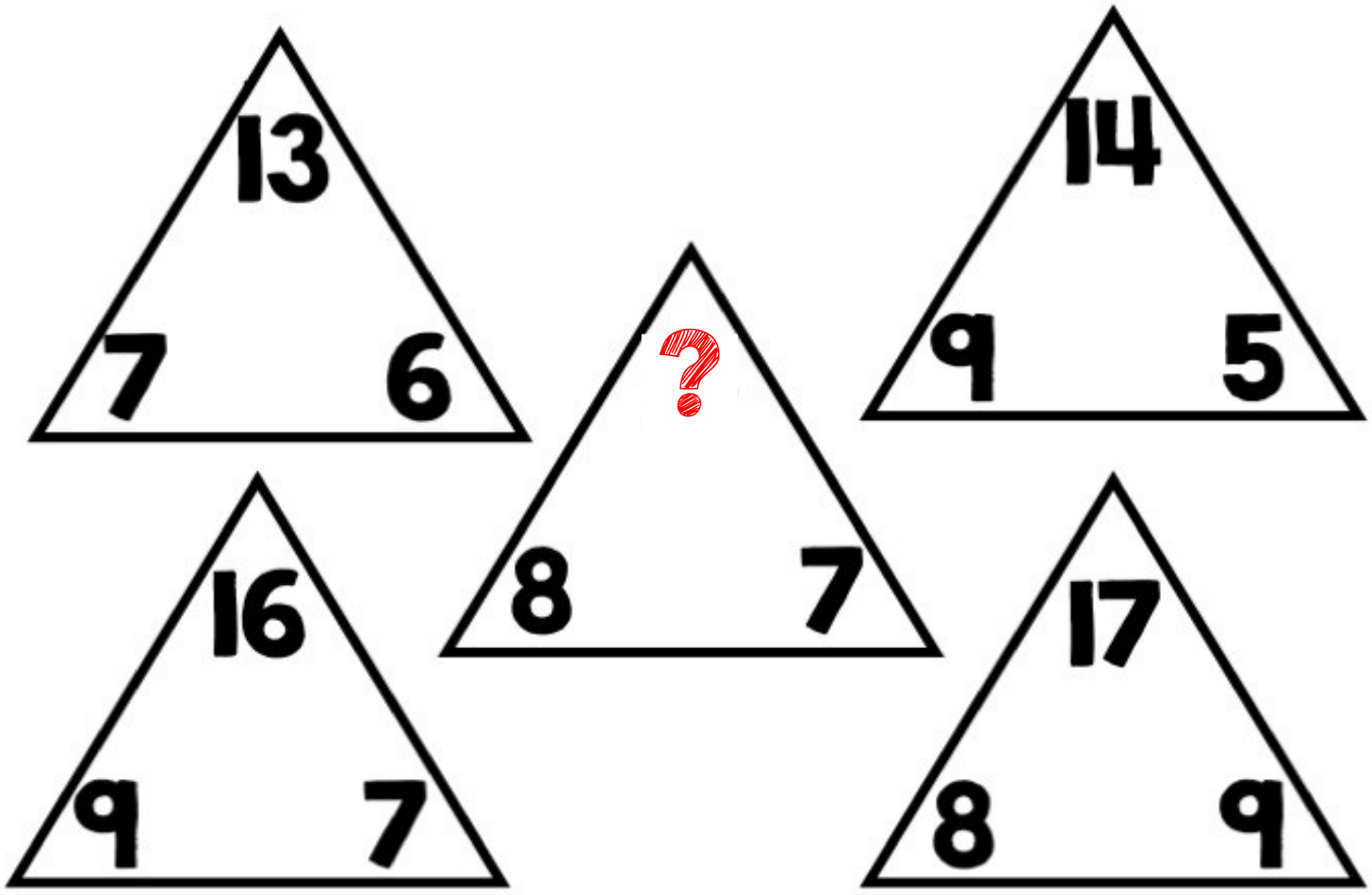
What number is missing from the triangle in the middle?



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Patterns

- What similarities or patterns do I notice?
- How can I describe the patterns?
- How can I use the pattern to make predictions or draw conclusions?

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