Coping with NP-completeness

Quiz, 3 questions

2/3 points (66.66%)

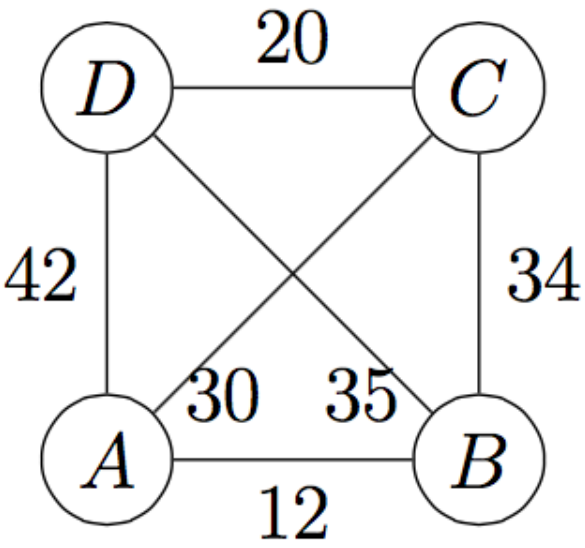
Congratulations! You passed!

Next Item

0 / 1 point

1.

What is the weight of a minimum traveling salesman cycle in the following graph?



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Incorrect Response

1 / 1 point

2.

Recall that the dynamic programming algorithm for the traveling salesman problem uses $O(n^2 \cdot 2^n)$ time and $O(n \cdot 2^n)$ space (as usual, n is the number of vertices). You are going to run this algorithm on a graph with 50 vertices. Roughly how much space is needed for this assuming that each cell of the dynamic programming table occupies 8 bytes? (See How much is 1 megabyte, gigabyte, etc?)

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- Kilobyte
- Megabyte
- Gigabyte
- Terabyte
- Petabyte
- Exabyte

Correct

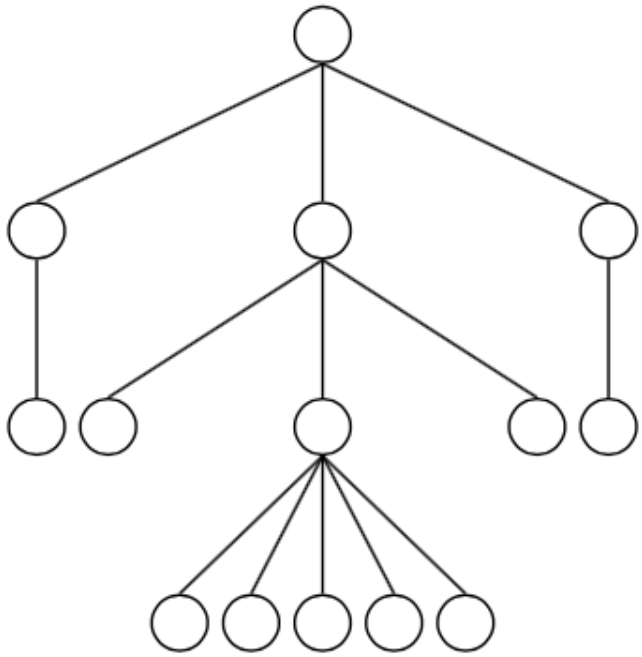
That's right! For this, we need about $8 \cdot 50 \cdot 2^{50} \approx 0.5 \cdot 2^{60}$ bytes.

- Zettabyte
- Yottabyte

1 / 1 point

3.

What is the maximum size of an independent set in the following tree?



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Correct Response
That's right!