✓ **Congratulations! You passed!**
TO PASS 80% or higher   QUIZ • 30 MIN

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GRADE
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Coping with NP-completeness

Coping with NP-completeness

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✓ **Submit your assignment**

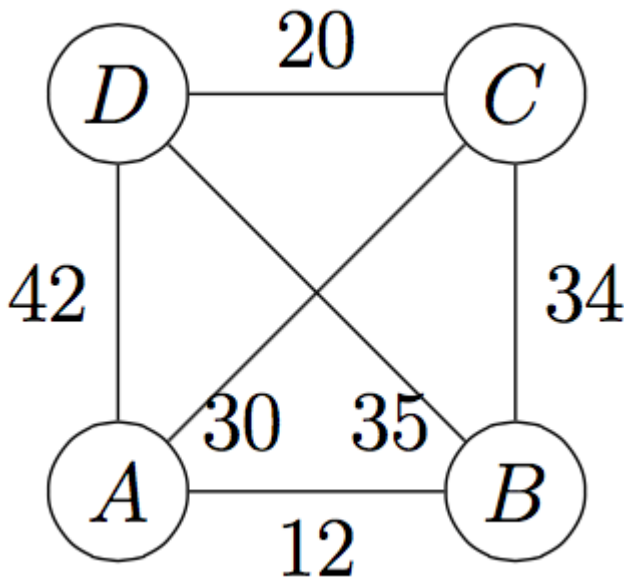**DUE DATE** Oct 26, 12:29 PM IST   **ATTEMPTS** 3 every 8 hours

Try again

1. What is the weight of a minimum traveling salesman cycle in the following graph?   **1 / 1 point**

Grade
100%

View Feedback

We keep your highest score

👍 👎 🚩

```
97
```

✓ **Correct**
    That's right!

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?)   **1 / 1 point**

   ○ Kilobyte

   ○ Megabyte

   ○ Gigabyte

   ○ Terabyte

   ○ Petabyte

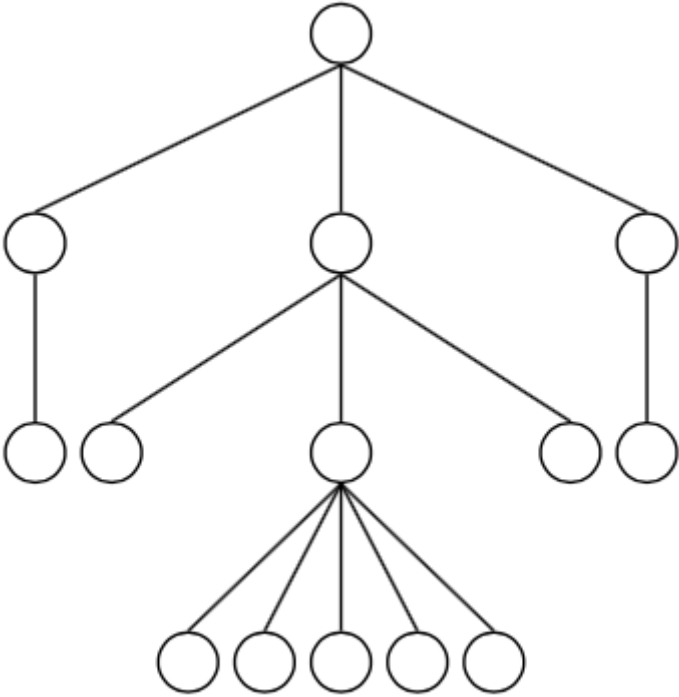   ● Exabyte

   ○ Zettabyte

   ○ Yottabyte

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

3. What is the maximum size of an independent set in the following tree?   **1 / 1 point**


```
10
```

   ✓ **Correct**
       That's right!