Course is completed. The course result can no longer be changed.

Powers of an Element

PREVIOUS NEXT

Quiz

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Now, it's time for a short quiz to recap what you've learned. The quiz is **graded**, so you can take it only once. Each question will be followed by feedback explaining why your answer is right or wrong. If your answer is incorrect, you will see a suggestion of what you might need to refresh your memory.

Good luck!

Read the question below and enter an answer. Then, click "Submit."

What is $-2^7 \bmod 5$?

2 ✔

2

Correct: Great job!

Submit You have used 1 of 1 attempt

? Hint

*Read the question below and select **all** the answers that are correct. Then, click "Submit."*

Let $k = -2^b \bmod 5$.

What are the accessible values for k?

- [x] 1
- [x] 2
- [ ] -1
- [ ] 0
- [x] 3
- [x] 4
- [ ] 5
- [ ] -2

✔

Correct: Nice job!

Submit You have used 1 of 1 attempt

Read the question below and select the correct answer. Then, click "Submit."

What is the result of (p * q) mod m?

- ( ) (p mod m) * (q mod m)
- ( ) (p mod m) * q

- ((p mod m) * (q mod m)) mod m
- p * (q mod m)

Correct: Great job!

Submit You have used 1 of 1 attempt

Read the question below and select the correct answer. Then, click "Submit."

Let b be odd.
What is the result of a^b mod m?

- $(a * a^{b-1})$ mod m
- $(a \bmod m)^b$
- $(a * a^{(b-1)/2})$ mod m
- $a * (a^{b-1} \bmod m)$

Correct: Nice job!

Submit You have used 1 of 1 attempt

Read the question below and select the correct answer. Then, click "Submit."

What is the time complexity of the right-to-left binary method for calculating a^b mod m?

- O(b)
- O(b * log b)
- O(log b)
- O(1)

Correct: Great job!

Submit You have used 1 of 1 attempt

< PREVIOUS NEXT >