

# CS50 Presents

## CS50x Puzzle Day 2022

### Instructions:

- You may use the internet and any other resources at your disposal.
- Have fun and good luck!

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### Puzzle 1: A Fox, a Goose and a Sack of Corn

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**Riddle:** A man went on a trip with a fox, a goose and a sack of corn.

He came upon a stream which he had to cross and found a tiny boat to use to cross the stream. He could only take himself and one other - the fox, the goose, or the corn - one at a time. He could not leave the fox alone with the goose or the goose alone with the corn.

**How does he get all safely over the stream?**

**Answer:** \_\_\_\_\_

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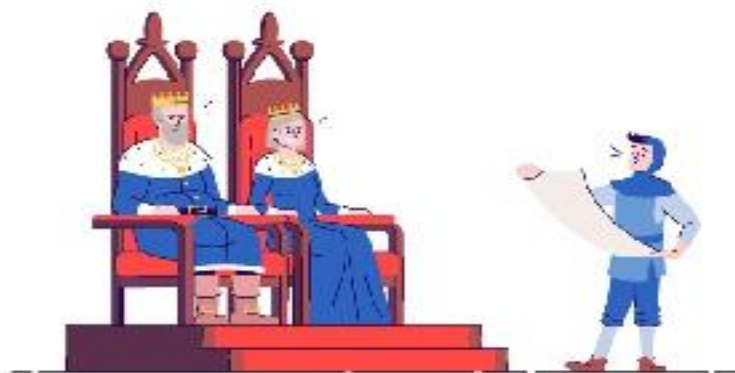
### Puzzle 2: Caesar Box

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The “Caesar Box or “Caesar Cipher” is one of the earliest known ciphers. Developed around 100 BC, it was used by Julius Caesar **to send secret messages to his generals in the field**. In the event that one of his messages got intercepted, his opponent could not read them.

The action of a Caesar cipher is to replace each plaintext letter with a different one a fixed number called the key of places down the alphabet.

Nowadays most applications use encryption to send messages over the internet.



Ohw'v pdnh wkh zruog d ehwwhu sodfh

Each letter has an ASCII code value search for it on Google and try to find the Key that encoded this message and try to decode it.

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### Puzzle 3: The Name is written on the Note

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One snowy night, Sherlock Holmes was in his house sitting by the fire. All of a sudden a snowball came crashing through his window and broke it. Holmes got up and looked out the window just in time to see 3 neighborhood kids who were brothers run around a corner. Their names were John Crimson, Mark Crimson, and Paul Crimson. The next day Holmes got a note that read: “**? Crimson. He broke your window.**”

Which of the 3 Crimson brothers should Sherlock Holmes question about the incident?

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**Puzzle 4: A man is looking at a photograph of someone.**

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A man is looking at a photograph of someone.

His friend asks who it is. The man replies, “Brothers and sisters, I have none. But that man’s father is my father’s son.

**” Who was in the photograph?**

**Answer:** \_\_\_\_\_

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### **Puzzle 5: A man stands on one side of a river**

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A man stands on one side of a river, his dog on the other. The man calls his dog, who immediately crosses the river without getting wet and without using a bridge or a boat.

**How did the dog do it?**

**Answer:**

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### Puzzle 6: Letters

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**What five-letter word becomes shorter when you add two letters to it?**

**Answer:**

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### Puzzle 7

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What has cities, but no houses; forests, but no trees; and water, but no fish?

Answer:

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### Puzzle 8: Daughters

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A man describes his daughters, saying, “They are all blonde, but two; all brunette but two; and all redheaded but two.

” How many daughters does he have?

**Answer:**

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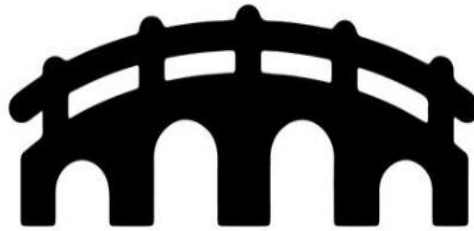
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### Puzzle 9: Bridge

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Four people arrive at a river with a narrow bridge that can only hold two people at a time. It's nighttime and they have one torch that has to be used when crossing the bridge.

**Person A can cross the bridge in one minute, B in two minutes, C in five minutes, and D in eight minutes.**

When two people cross the bridge together, they must move at the slower person's pace.

**Can they all get across the bridge in 15 minutes or less?**

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**Puzzle 10**

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**What do an island and the letter “t” have in common?**

**Answer:**

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### Puzzle 11: The Three Children

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Johnny's mother had three children.

The first child was named "April." The second child was named "May."

What was the third child's name?

**Answer:**

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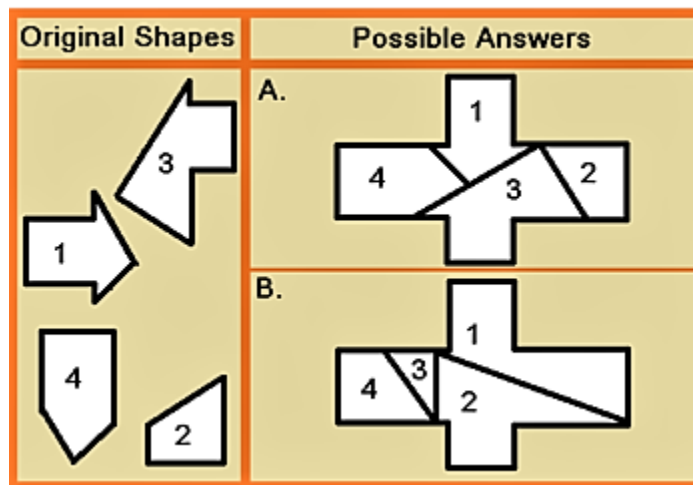
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### Puzzle 12: Shape

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Check out the next example to see if you can determine the correct answer. Look carefully at the original shapes.

Then, apply any of the strategies necessary for you to get the **correct answer**

**Answer:**

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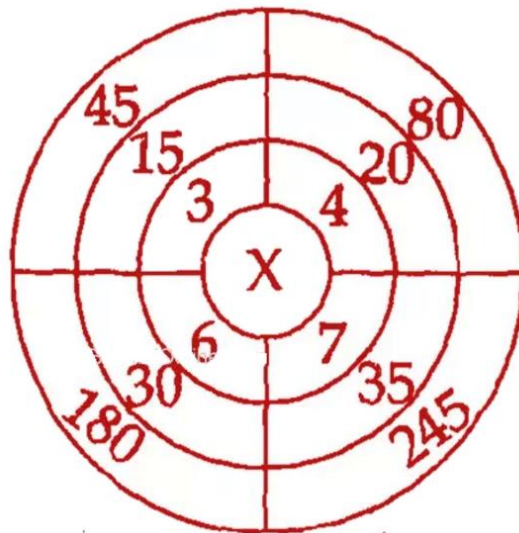
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### Puzzle 13: Value Of X

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Find the Value of X in the Given Picture ?

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Answer:

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### Puzzle 14: Guess the name of the murderer

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- A rich man that lived in a beautiful house on Baker Street, Mr. Ronald Green, has just been kidnapped and Sherlock Holmes has been appointed to the case. He finds a note at the crime scene written by Mr. Green. It read:  
**“First of January, Fourth of October, Fifth of March, Third of June.”**
- Sherlock knew that somehow, the killer’s name was hidden in the note. The suspects were as follows:
- **Jack Green**, the son and the heir of the property  
**John Jacobson**, an employee of Mr. Green  
**June Green**, Green’s wife  
Sherlock deduced the killer’s name in an instant. Can you?