Topic: Converses of conditionals

Question: Choose the converse statement of “If I'm lying, then my lips are moving.”

Answer choices:

A If I'm not lying, then my lips are not moving.

B If my lips are moving, then I'm lying.

C If my lips are not moving, then I'm not lying.

D If I'm telling the truth, then my lips are moving.

Solution: B

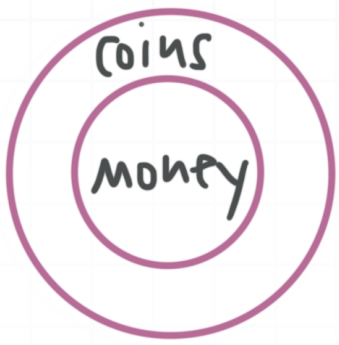
The two phrases “my lips are moving” and “I'm lying” have been switched, which is how the converse of a conditional statement is formed.

Topic: Converses of conditionals

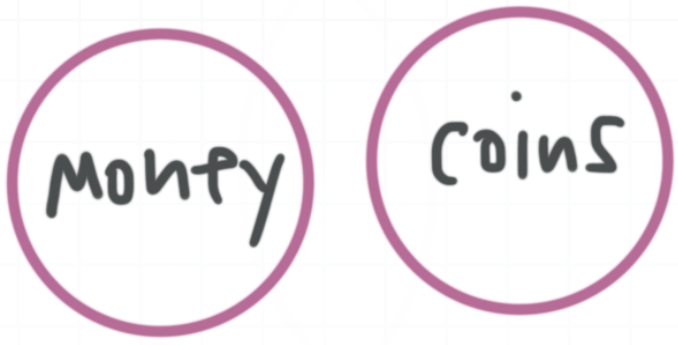
Question: Choose the Euler diagram that corresponds to the converse of the statement “All coins are money.”

Answer choices:

A



B



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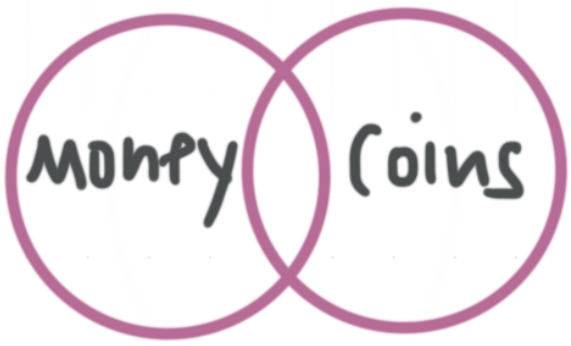

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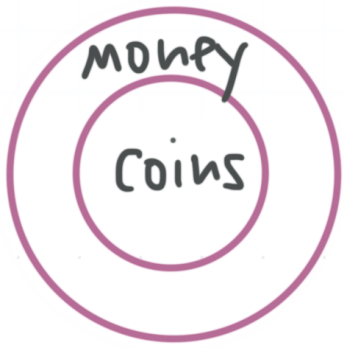

Solution: A

The statement “All coins are money” can be phrased as an if/then statement:

“If it's a coin, then it's money.”

The converse would be

“If it's money, then it's a coin.”

Diagram A shows that if a thing is money (in the Money circle), it's always a coin (in the Coin circle). In other words, all money is made of coins.

Topic: Converses of conditionals

Question: Suppose a certain if/then statement is true. Will the converse of that statement be true?

Answer choices:

A Sometimes

B Always

C Never

D Only on Tuesdays

Solution: A

Whether the converse is true depends totally on the original statement. Sometimes the converse is true, and sometimes it's not.

Note: If the original statement is a *definition*, its converse will be true.

> Example: If it's a triangle, it has three sides.
>
> Converse: If it has three sides, it's a triangle.

Both statements are true, because the definition of triangle is “a figure with three sides.”