Doodles & Doors

Directions:

1) Which doodles can you trace without picking up your marker and without retracing any lines? Are there any that are impossible?

2) For each dot (called a *vertex*), label how many line segments (called *edges*) meet at the vertex.
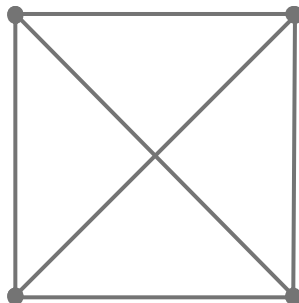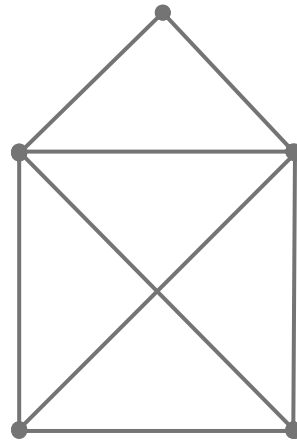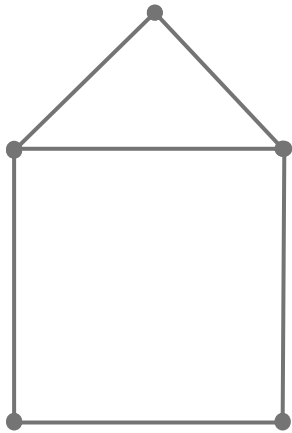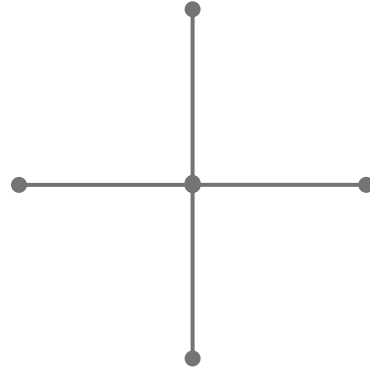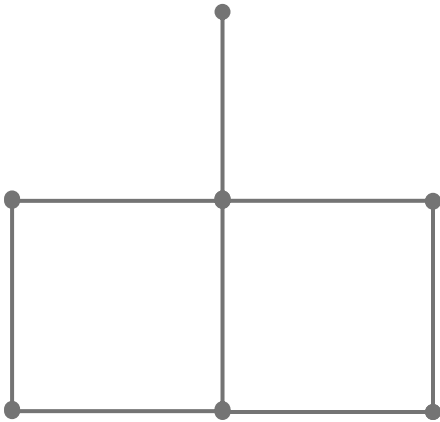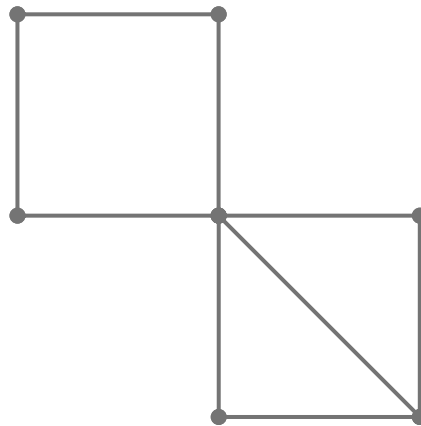
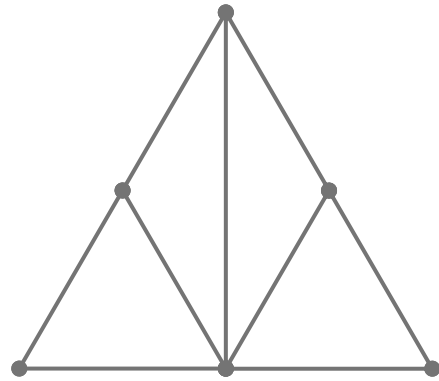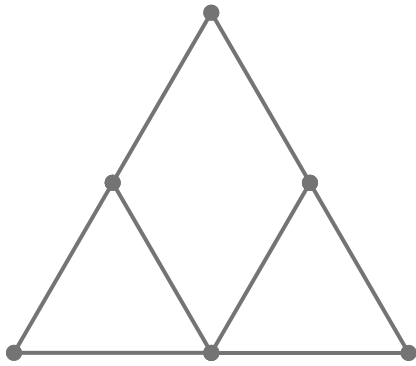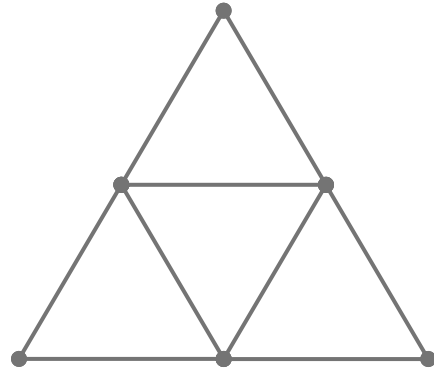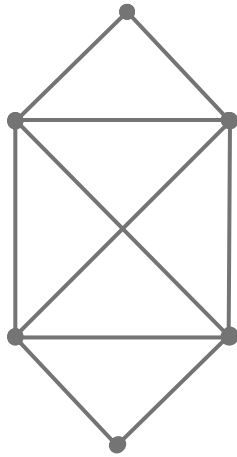**Question:** Do you notice anything about the numbers that you wrote down at each vertex and whether you could draw a doodle without picking up your marker and without retracing any lines?

Directions: For each doodle, is it possible to trace the doodle without picking up your marker or retracing any lines **if you start and end where it says**? If so, draw a ✓. If it's impossible, draw an ✗.

Start & End

Start & End

Start

End

Start

End

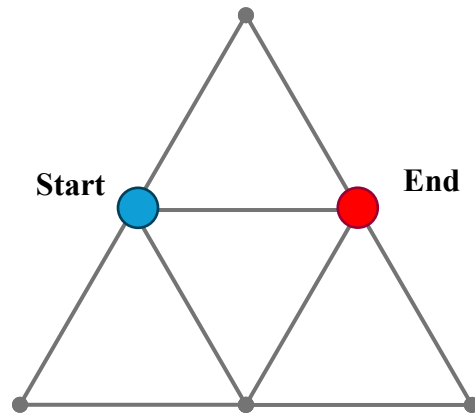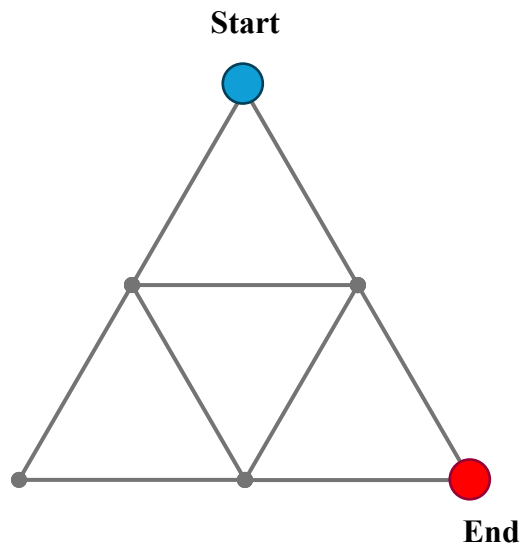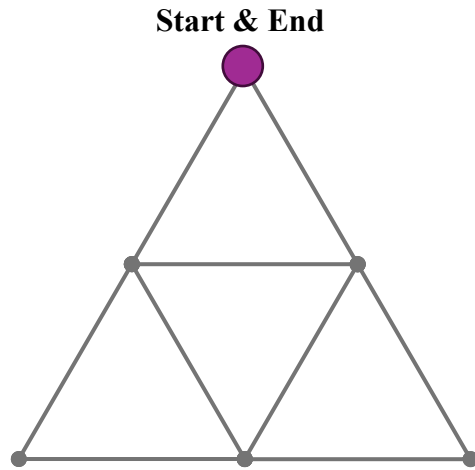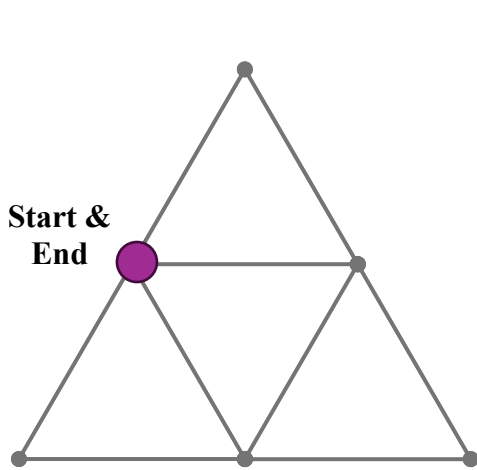**Question:** Do you notice anything about where you could start and end while drawing this doodle without picking up your marker and without retracing any lines?

Directions: For each doodle, is it possible to trace the doodle without picking up your marker or retracing any lines **if you start and end where it says**? If so, draw a ✓. If it's impossible, draw an ✗.

Start & End

Start

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Start & End

Start
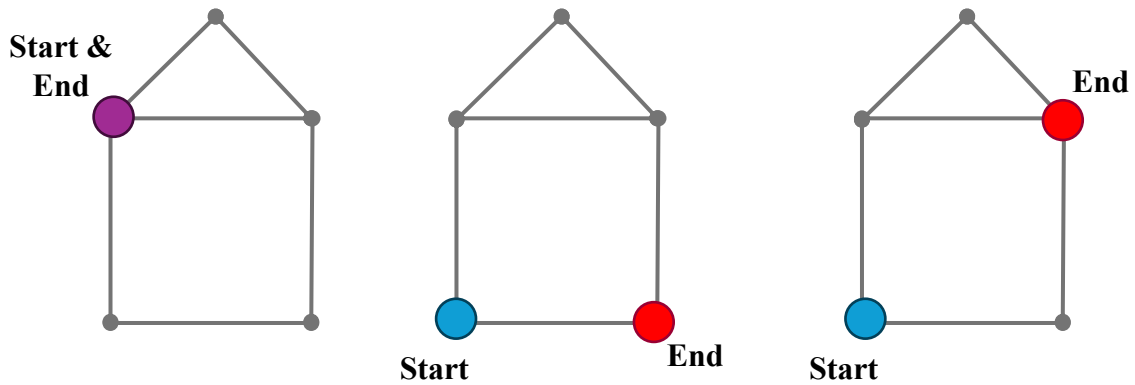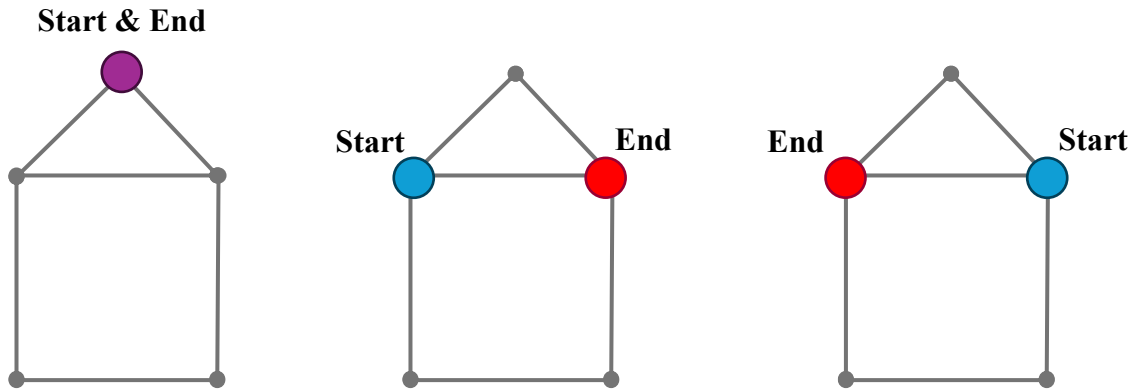
End

End

Start

Question: Do you notice anything about where you could start and end while drawing this doodle without picking up your marker and without retracing any lines?

Directions: For each doodle, is it possible to trace the doodle without picking up your marker or retracing any lines **if you start and end where it says**? If so, draw a ✓. If it's impossible, draw an ✗.

Start & End

Start   **End**

End   **Start**

Start & End
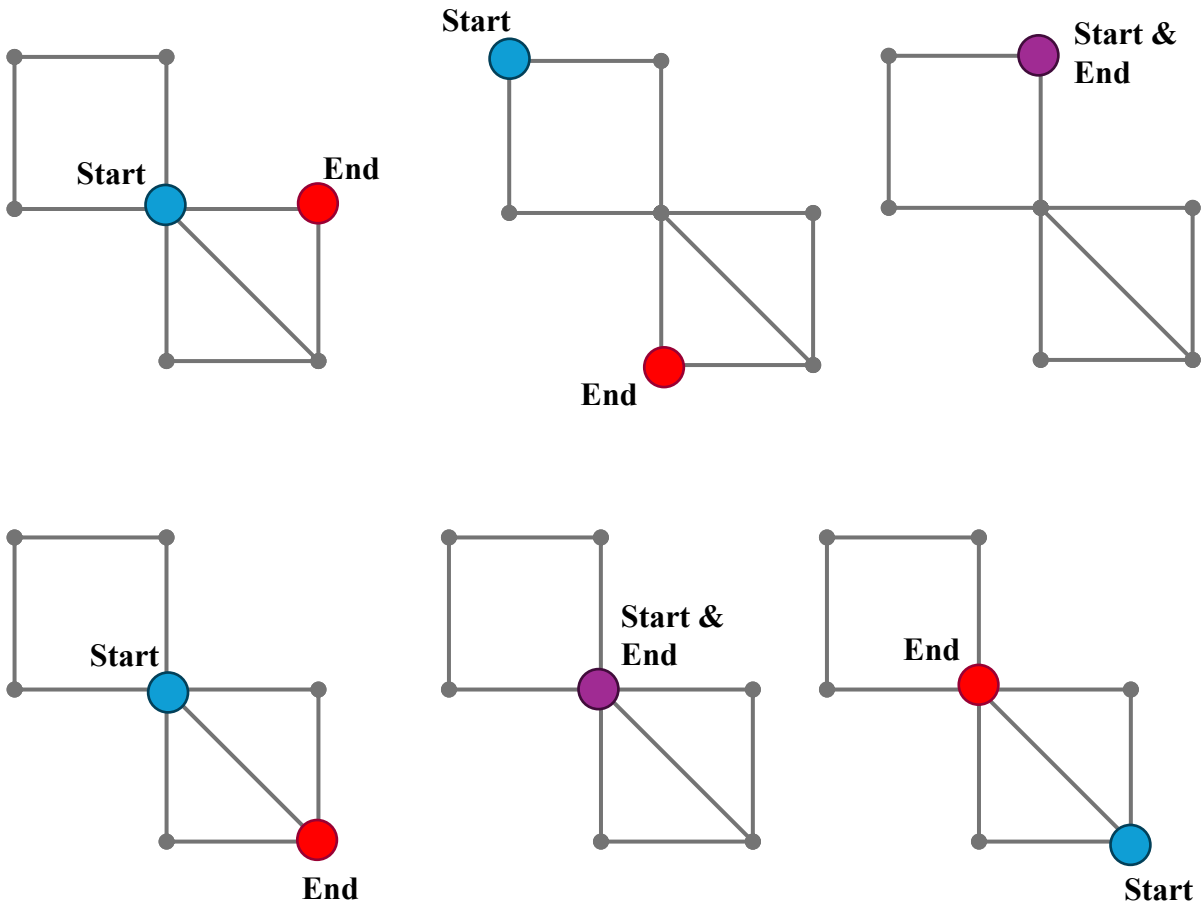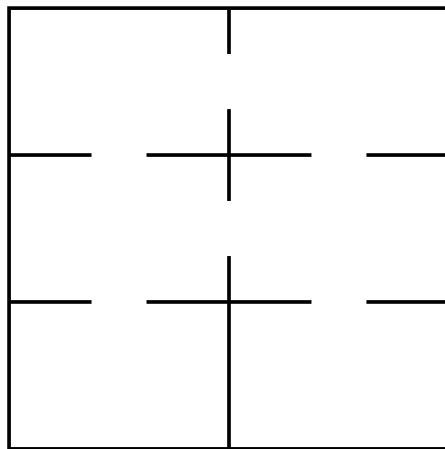
Start   **End**

End

Start

Question: Do you notice anything about where you could start and end while drawing this doodle without picking up your marker and without retracing any lines?

Directions: For each doodle, is it possible to trace the doodle without picking up your marker or retracing any lines **if you start and end where it says**? If so, draw a ✔. If it's impossible, draw an ✗.
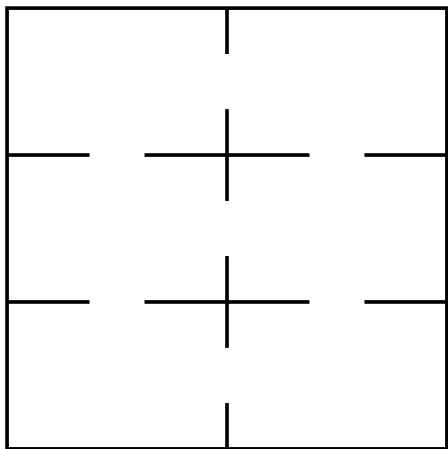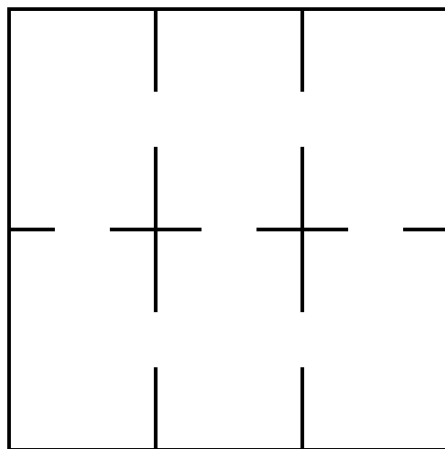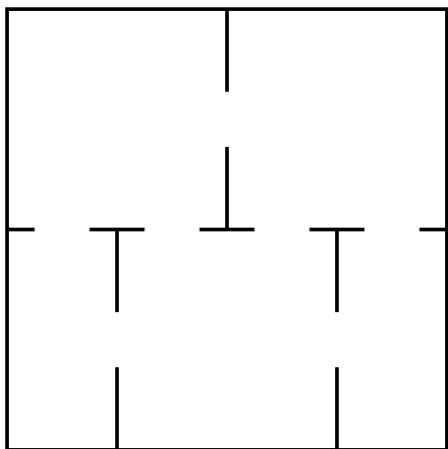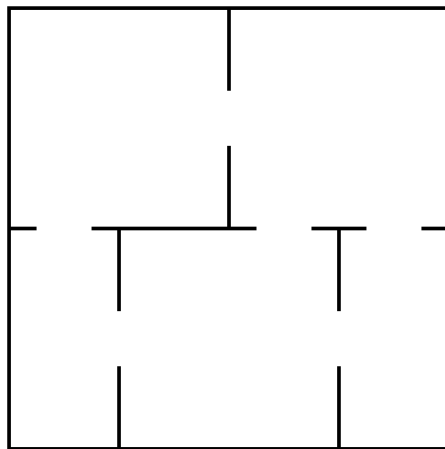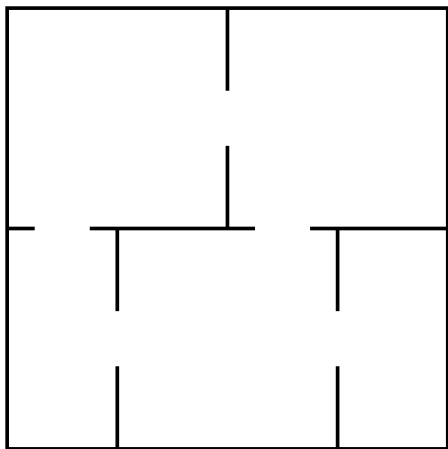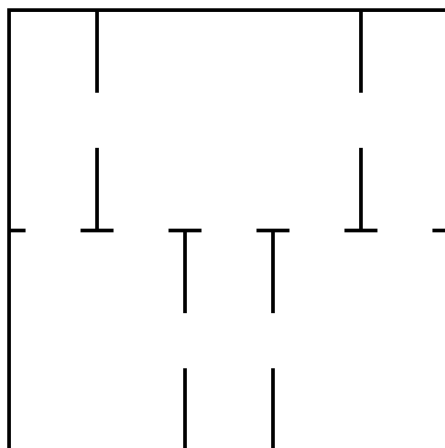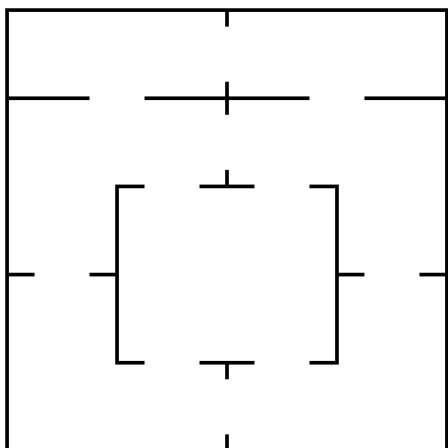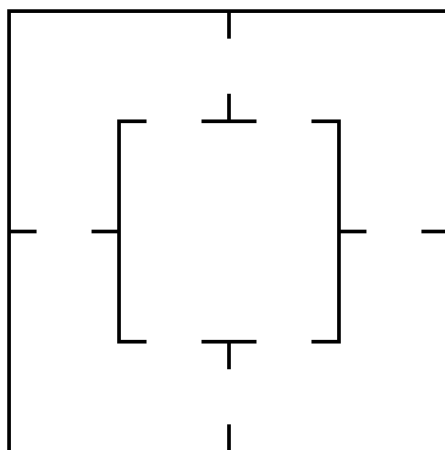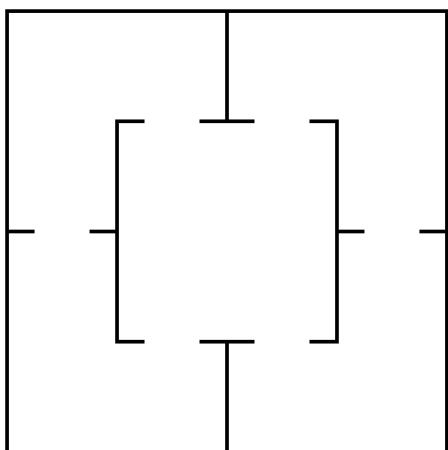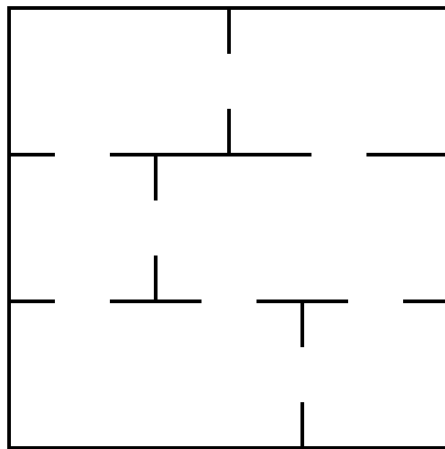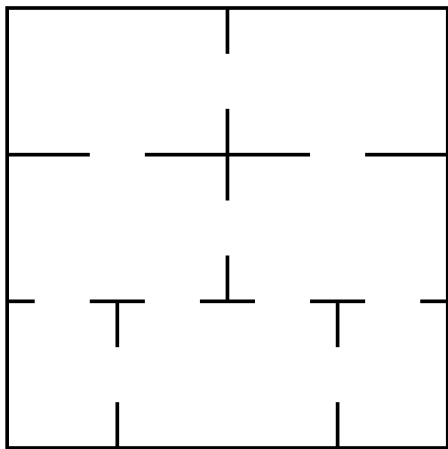

Question: Do you notice anything about where you could start and end while drawing this doodle without picking up your marker and without retracing any lines?

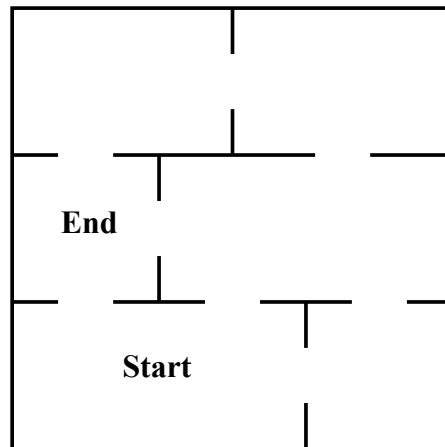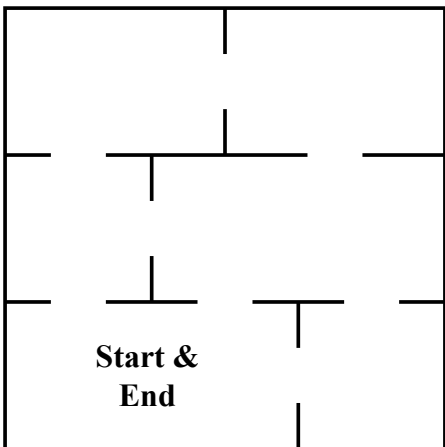For each set of rooms, can you trace a path that goes through **each doorway exactly once?** (You can start in any room you want, your path can visit the same room more than once, and your path doesn't have to end in the same room where it started.) Are there any that are impossible?
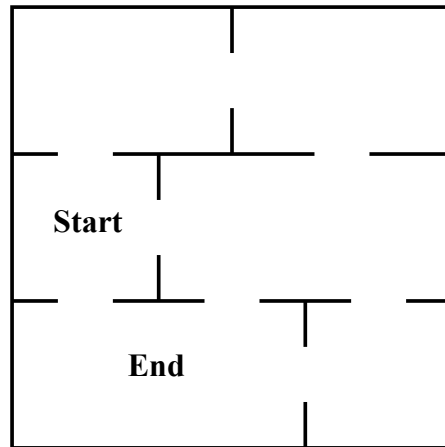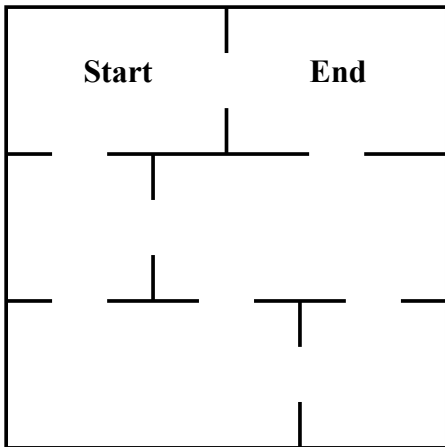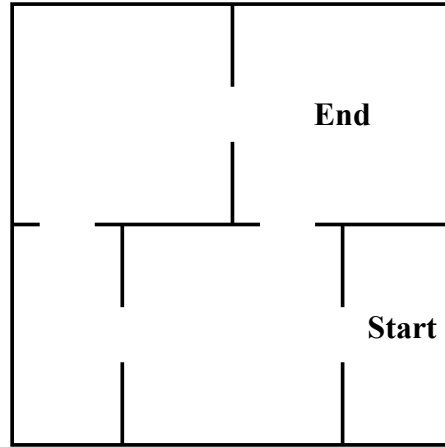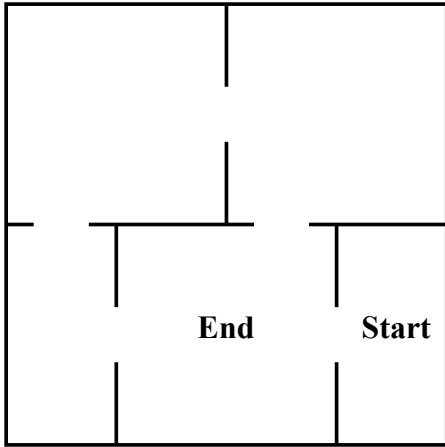
For each set of rooms, can you trace a path that goes through **each doorway exactly once?** (You can start in any room you want, your path can visit the same room more than once, and your path doesn't have to end in the same room where it started.) Are there any that are impossible?

For each set of rooms, is it possible to trace a path that goes through each doorway exactly once **if you start and end where it says**? If so, draw a ✓. If it's impossible, draw an ✗.

For each set of rooms, is it possible to trace a path that goes through each doorway exactly once **if you start and end where it says**? If so, draw a ✓. If it's impossible, draw an ✗.

Start &
End

Start &
End

Start

End

Start

End

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Start

Start &
End