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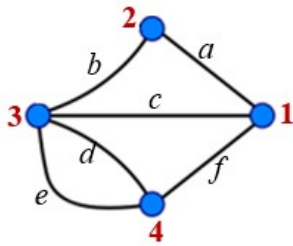
Help

U1 (1/1 point)

In the six-bridge problem as shown by the graph below, how many ways are there of traversing all six bridges (shown as edges here) exactly once? (Please calculate the exact figure).

32

32

Answer: 32

EXPLANATION

we now proceed to enumerate all the possibilities.

Starting from 1 and returning to 4 contains 16 possibilities:

a-b-c-f-d-e a-b-c-f-e-d a-b-d-e-c-f a-b-d-f-c-e a-b-e-d-c-f a-b-e-f-c-d

c-b-a-f-d-e c-b-a-f-e-d c-d-e-b-a-f c-d-f-a-b-e c-e-d-b-a-f c-e-f-a-b-d

f-d-c-a-b-e f-d-b-a-c-e f-e-b-a-c-d f-e-c-a-b-d

Similarly, starting from 4 and returning to 1 also contains 16 possibilities. Let's all have a go at listing those.

You can also refer to the solution as demonstrated: 32 ways

Our answer

Explanation: As follow

Starting from 1 and arriving at 4 contains 16 possibilities：

a-b-c-f-d-e a-b-c-f-e-d a-b-d-e-c-f a-b-d-f-c-e a-b-e-d-c-f a-b-e-f-c-d

c-b-a-f-d-e c-b-a-f-e-d c-d-e-b-a-f c-d-f-a-b-e c-e-d-b-a-f c-e-f-a-b-d

f-d-c-a-b-e f-d-b-a-c-e f-e-b-a-c-d f-e-c-a-b-d

Similarly，starting from 4 and finishing at 1 also contains 16 ways，and we can have a go at enumerating those, or simply follow through the demonstration.

Display the hyperlink and select an input of 0。

Final Check   Save   Hide Answer   *You have used 2 of 3 submissions*

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