



I have a math puzzle that I just can't get.

You have 4 people (A, B, C and D) that need to cross a bridge under 13 min and only 1 flashlight. You can only go with the flashlight, no more than 2 persons at a time, and always as fast as the slowest person. To cross the bridge persons need: A=1min; B=2min; C=5min; D=6min. How do you get all 4 of the across in only 13 min?

P.S. they can't go on each others back
A.

* This puzzle is one of several well-known puzzles of this type. In fact, it's a clever version of traditional crossing river puzzles.

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1. A and B go over... 2 mins.
2. A comes back... 3 mins.
3. C and D go over... 9 mins.
4. B comes back... 11 mins.
5. A and B go over... 13 mins.

Bridge Puzzle

Solution by Hüsnu Sincar

Puzzles.COM

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A=1 min B=2 min C=5 min D=6 min
Step Direction Couple Duration (min)
1 > AB 2
2 < A 1
3 > CD 6
4 < B 2
5 > AB 2

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Here is a solution to the Bridge and Flashlight problem. Recall the labeling as

A = 1 minute
B = 2 minutes
C = 5 minutes
D = 6 minutes

1) A and B cross.
2 minutes pass, 2 minutes total

Side 1: C, D
Side 2: A, B

2) B crosses back (please see Note).
2 minutes pass, 4 minutes total

Side 1: B, C, D
Side 2: A

3) C and D cross.
6 minutes pass, 10 minutes total

Side 1: B
Side 2: A, C, D

4) A crosses back.
1 minutes passes, 11 minutes total

Side 1: A, B
Side 2: C, D

5) A and B cross.
2 minutes pass, 13 minutes total

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To solve this puzzle first you have to have a left and right side of the bridge. All four people are on the right side of the bridge.

The first to cross to the left side of the bridge are the 1 and 2 minute persons. This leaves 11 minutes.

The 2 minute person stays on the left side while the 1 minute person goes to the right side with the flashlight, leaving 10 minutes.

The 1 minute person stays on the right side while the 5 and 6 minute person goes to the left side, leaving 4 minutes.

Now the 2, 5 and 6 minute person are on the left and the 1 minute person on the right. The 2 minute person goes back over the bridge with the flashlight, leaving 2 minutes.

Now, the 5 and 6 minute persons are on the left and the 1 and 2 minute persons are on the right. Finally, the 1 and 2 minute persons cross to the left side of the bridge leaving 0 minutes left and all people on the left side.

Good Luck

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A goes with B : 2mins
A returns : 1min
C goes with D : 6 mins
B returns : 2min
A goes with B : 2min

Total : 13 mins

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a and b go over. a comes back. c and d come over. b comes back. a and b go over and you are finished.

1 2 1 5 6 2 1 2
2 + 1 + 6 + 2 + 2 =equals= 13!!!

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Here is the solution. The reader probably keeps getting 15 minutes.

A and B go across 2 min
A comes back 1 min
C and D go across 6 min
B comes back 2 min
A and B go across 2 min

$2+1+6+2+2 = 13$ It is the same result whether A or B come back first, but they must come back second.