Network Compression – Additional exercise

Steps:

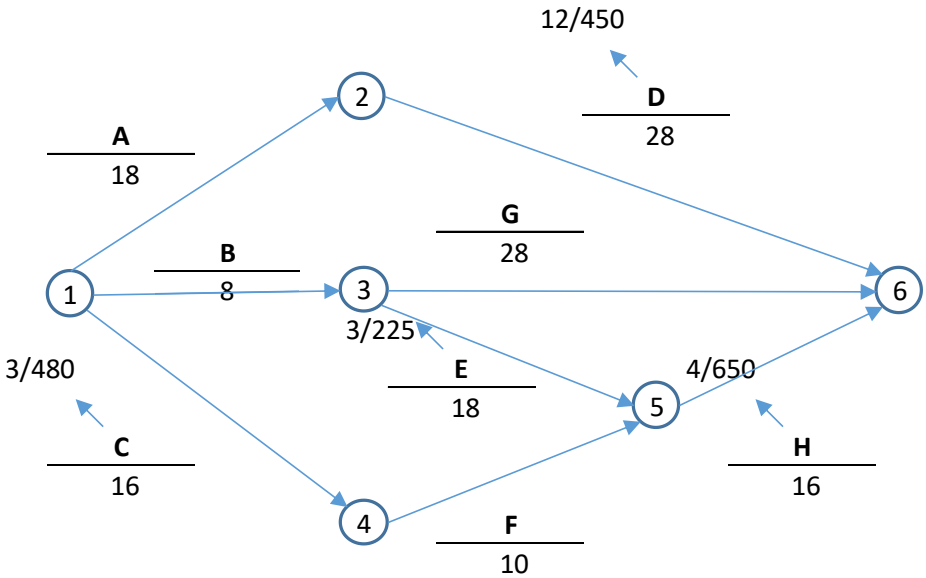
1. Draw an all-normal network diagram, and find out the critical path.
2. Pay a close attention to "network limitation", and find out which activities are not to be compressed then cross these activities out.
3. Start to compress the activity in critical path by the number of days until the next chain become critical. And calculate the increase in project cost.
4. If a second critical path develops then we must compress each chain by an equal amount to achieve compression. If there were three critical paths then we would have to compress each of the three chains by the same amount to achieve a certain compression. Then again repeat the network calculation and the cost increase.
5. Repeat step 4 until full crash of the project.
6. Prepare a quotation to compress the project to the certain required duration. And calculate the activity duration.
7. Calculate the minimum target selling price based on the following formula:
   Total build cost = Normal project cost + Extra cost to achieve the required duration
   Target selling price = (1 + margin) x Total build cost

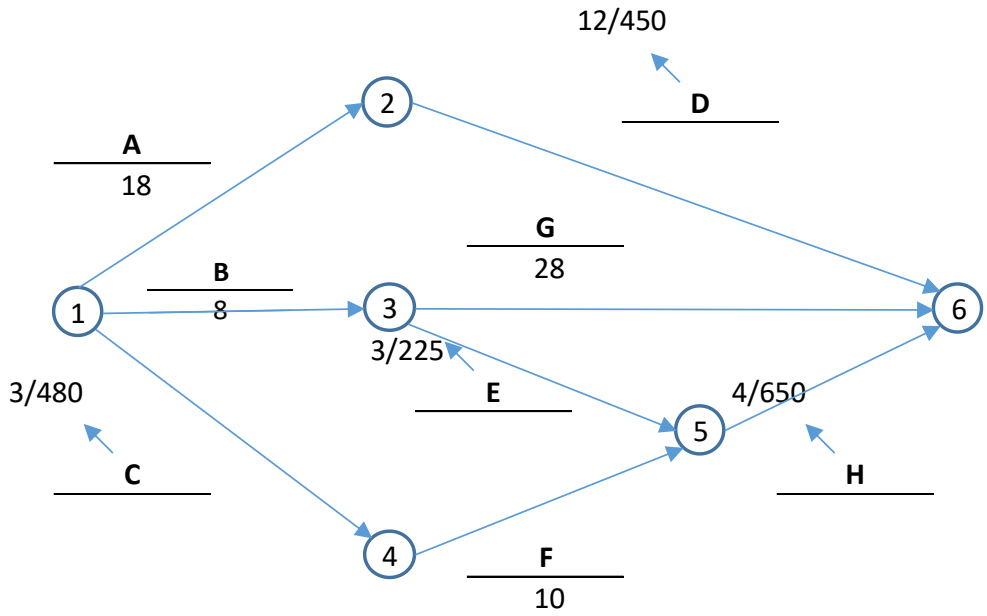
Question:

Your company has received a Request for Quotation where the project duration must be 37 days maximum. Your company's target margin is 40% on build cost. A systems engineer has planned out the job and has drawn the project network as shown below. Activity durations are for the All Normal situation and compression options are shown in the usual notation. All Normal project cost is $42,645.

QUESTIONS:

1. Carry out project compression calculations up to full crash. Show the details of each compression.
2. Prepare the quotation to achieve the 37 days project duration.
   Calculate:
   a) Activity durations.
   b) Minimum target selling price.

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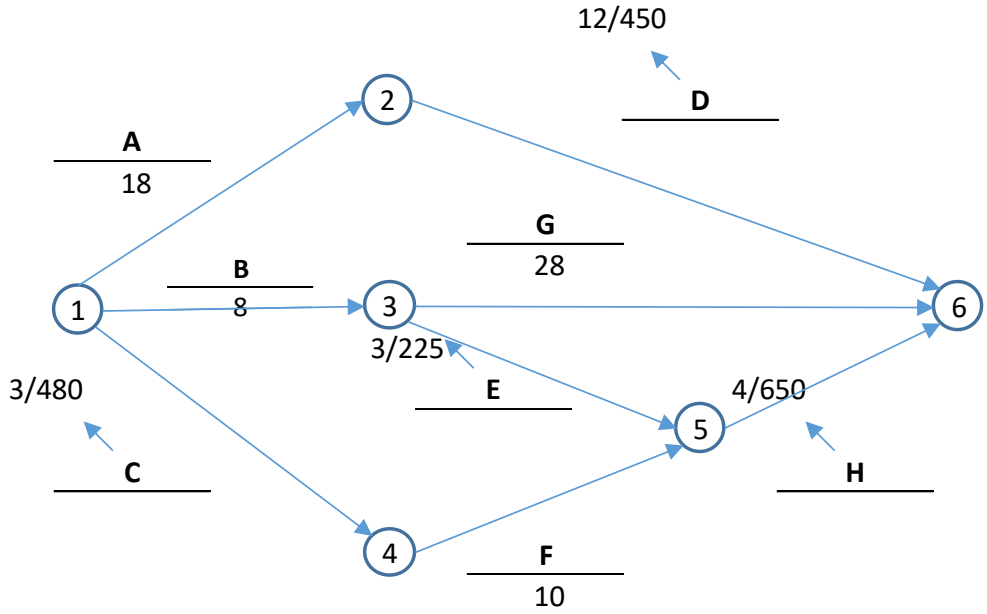
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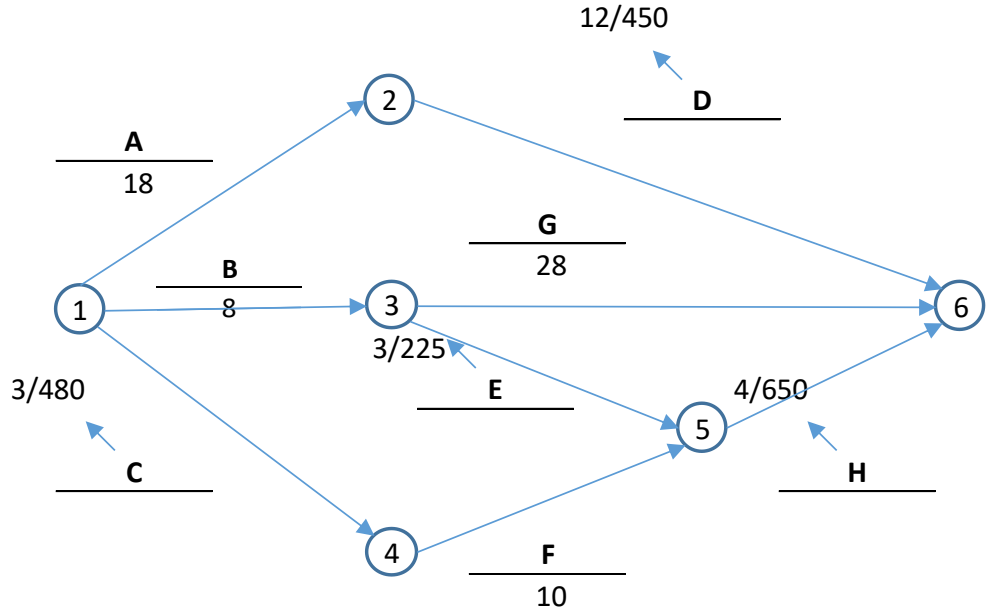
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