CRA MATH

Problem #1 = Equipment Grant
      Minimum Award $100,000
      Maximum Award $500,000
      20% Match required

What is minimum Total Project Cost with 20% Match?

What is Maximum Total Project Cost (Grant & Match) with 20% match?

Problem #2 =
      $250,000 Total Project Cost
      30% Match Required
      40% Institutional F&A rate (MTDC) basis

What is Total Direct Costs requested (assuming no equipment)?

Problem #3 =
      $165,000 Direct Costs requested, $15,000 of which is equipment
      50% Institutional F&A rate (MTDC basis)
      25% match required

What is minimum Institutional Match required?

Problem #1 = Equipment Grant

    Minimum Award $100,000

    Maximum Award $500,000

    20% Match required

    What is minimum Total Project Cost (Grant and Match) with 20% Match?

        $100,000/80% = $125,000

    What is Maximum Total Project Cost (Grant & Match) with 20% match?

        $500,000/80% = $625,000

20% match required, therefore award is 80% of total project cost

$100,000 (minimum award) divided by 80% = $125,000 total project cost

$500,000 (maximum award) divided by 80% = $625,000 total project cost

Problem #2 =

    $250,000 Total Project Cost

    30% Match Required

    40% Institutional F&A rate (MTDC) basis

    What is Total Direct Costs requested (assuming no equipment)?

        $250,000 x 30% = $75,000 match required

        $250,000 - $75,000 = $175,000 Total Request

        $175,000/1.40 = $125,000 Direct Cost Request

$250,000 (Total Project) x 30% = $75,000 Match Required

$250,000 - $75,000 = $175,000 Total Costs Requested

$175,000 divided by 1.40 = $125,000 Direct Costs Requested

Problem #3 =

    $165,000 Direct Costs requested, $15,000 of which is equipment

    50% Institutional F&A rate (MTDC basis)

    25% match required

    What is minimum Institutional Match required?

        $165,000 - $15,000 = $150,000 MTDC

        $150,000 x 50% = $75,000 F&A

        $165,000 + $75,000 = $240,000 Total Requested

        $240,000/75% = $320,000 Total Project

        $320,000 - $240,000 = $80,000 Institutional Match

$165,000 (Direct Cost) - $15,000 (Equipment) = $150,000 Modified Total Direct Costs (MTDC)

$150,000 (MTDC) x 50% F&A rate = $75,000 F&A

$165,000 (Total Direct) + $75,000 (F&A) = $240,000 Total Request

25% Match required, therefore award is 75% of Total Project Cost

$240,000 divided by 75% = $320,000 Total Project Cost

$320,000 (Total Project) - $240,000 (Total Request) = $80,000 Match Required

Other notes:

Sometimes a sponsor will give you a formula to follow to calculate cost share that doesn't match usual parameters, you should use their formula if it works; if not you should contact the program officer for clarification.

If a sponsor only specifies cost share at a certain percentage based on the sponsor requested amount then you should do your math based on that (do not use total project costs unless you have to).

If a sponsor says total project costs and you suspect they could really mean they only want you to match the amount you are requesting from them, then you should ask for clarification.

It is possible if a sponsor is asking for cost share on total project costs (and there are no specified minimums or maximums-or you are well under the maximum) that you will be in a situation of a somewhat 'round' formula—as you increase your match you are also increasing the total project costs. This does occur, and at some point you will reach a tipping point where the match will meet or exceed the amount you need to provide to reach the percentage you have been given to attain. This does result normally in more than the match the sponsor is saying in the solicitation. For example they may say 1:1 but if it is on Total project costs it may be more like 1:1.25 or 1.5 in reality.

If a sponsor limits your indirect costs then in effect they have negated your IDC agreement and unless they stipulate otherwise in their guidelines this means that you do not have to use Modified Total Direct Costs or just Salary (you can use Total Direct Costs).