

# ***Proposal Budgeting Calculations***



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# Practice Questions

**A researcher is proposing a budget to NSF for \$50,000 in equipment. The Indirect Rate is 46%. How much money will be available for equipment?**

A. \$22,750

B. \$27,250

C. \$50,000

D. \$24,000

**Answer: C. \$50,000**

No indirect is charged on equipment



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## How to calculate indirect costs based on Total Project Costs (TPC) or Total Funds Requested

The easiest way to do this calculation is to first convert the TPC rate to a TDC rate using the following formula:

Example: Sponsor limits the F&A costs on the proposals to 20% of the Total Funds requested

$$\frac{\text{TPC indirect rate}}{(1 - \text{TPC indirect rate})} = \text{TDC indirect rate}$$

$$\frac{20\%}{(1 - 20\%)} = \frac{20}{(100 - 20)} = \frac{20}{(100 - 20)} = \frac{20}{80}$$

$$= 0.25 = \mathbf{25\% \text{ TDC}}$$



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**A researcher is applying to a USDA program that requires indirect costs to equal 30% of total costs. Which IDC rate below can be used to meet this requirement?**

A. 30% TDC

B. 33.333% TDC

C. 43.547% TDC

D. 42.857% TDC

$$\frac{\text{TPC indirect rate}}{(1 - \text{TPC indirect rate})} = \text{TDC indirect rate}$$

$$\frac{30}{(100 - 30)} = \frac{30}{70} = 0.42857 = 42.857\% \text{ TDC}$$

**Answer: D. 42.857% TDC**



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**XYZ University has an indirect cost rate of 45.5%. A project is budgeted at \$125,000 in direct costs and includes permanent equipment at \$30,000 which is the only item excluded from the indirect cost base. What are the total project costs?**

A. \$195,525

B. \$168,225

C. \$181,875

D. \$246,000

**Answer: B. \$168,225**

1.  $\text{MTDC} = \$125,000 \text{ (Direct Costs)} - \$30,000 \text{ (Permanent Equipment)} = \$95,000$
2.  $\text{Modified Total Direct Costs} = \$95,000$
3.  $\$95,000 \text{ (MTDC)} * 45.5\% \text{ (Indirect Rate)} = \$43,225 \text{ (F\&A Costs)}$
4.  $\$125,000 \text{ (direct costs)} + \$43,225 \text{ (F\&A Costs)} = \$168,225 \text{ Total Project Costs}$



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**A DOE solicitation requires cost sharing – 20% of Total Project Costs. Total Sponsor Costs (federal dollars) are \$300,000. What is the Total Cost Sharing amount required ?**

A. \$75,000

B. \$65,000

C. \$60,000

D. \$72,500

**Answer: A. \$75,000**

1.  $100\% - 20\% (X) = 80\% (Y)$
2.  $20\% (X) / 80\% (Y) = 25\% (Z)$
3.  $\$300,000 \times 25\% = \$75,000$

**X = Cost Sharing % Required**

**Y = Portion of Total Project Cost requested from sponsor**

**Z = Cost Share Multiplier (*calculated*)**



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**A researcher has permission to rebudget \$75,000 from equipment into a research associate salary. If the institutions indirect cost rate (based on MTDC) is 50% and the fringe benefit rate for a research associate is 30%, how much money will be available for the research associate's salary?**

A. \$37,500

B. \$57,692

C. \$38,461

D. \$50,000

**Answer: C. \$38,461**

1.  $\$75,000 / 1.5 (X) = \$50,000$  (Salary & Fringe)
2.  $\$50,000 / 1.3 (Y) = \mathbf{\$38,461}$



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**Professor Smith's 9 month salary is \$185,000. He plans to include 2 months effort, \$10,000 for materials & supplies, \$6,000 in equipment, and \$3,000 for travel in his budget to the National Cancer Institute. Assuming a fringe rate of 28%, F&A rate of 52%, and a current NIH Salary Cap of \$225,700, what is the total budget cost?**

A. \$120,066

B. \$102,066

C. \$95,600

D. \$98,946

**Answer: D. \$167,453**

1. Is the PI subject to the NIH Salary Cap?

$$\$185,000 / 9 = \$20,556$$

$$\$20,556 \times 12 = \$246,667$$

$$\$246,667 > \$225,700 \rightarrow \text{YES!}$$

2. Salary = 2 months x (\$225,700 / 12) = \$37,616

3. Fringe = \$37,616 x 28% = \$10,533

4. Materials/Supplies: \$10,000

5. Travel: \$3,000

6. Equipment: \$6,000

7. IDC = \$61,149 (MTDC) x 52% = \$31,797

8. Total Budget = \$67,149 (TDC) + \$31,797 (IDC) = **\$98,946**



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***THANK YOU***

Texas A&M University  
Division of Marketing & Communication