

Final Project: Budgeting with Equations & Inequalities

Name: _____ Date: _____

LEARNING OBJECTIVE

The student will apply equations and inequalities to a real budgeting scenario, including finding an exact value and a range of possible values.

MATERIALS NEEDED

- Notebook paper
- Pencil
- Ruler
- Calculator (optional, for checking work)
- Play money or drawn/cut-out paper bills (optional, for modeling)

HANDS-ON ACTIVITY

1. Imagine you have \$50 saved and want to buy school supplies that include a \$12 backpack plus notebooks that cost \$4 each. Write and solve an equation to find how many notebooks (n) you can buy if you spend exactly \$48 total.
2. Now write and solve an inequality to find the maximum number of notebooks you could buy WITHOUT spending more than your full \$50.
3. If using play money or paper bills, physically lay out \$50, remove \$12 for the backpack, and divide the rest into \$4 groups to confirm your inequality answer.
4. Design your own 2-item budget scenario (choose 2 real or realistic item prices) and write both an equation and an inequality for it, then solve both.
5. Create a simple table or poster summarizing all 4 problems (2 equations, 2 inequalities) with their solutions clearly labeled.

QUESTIONS

1. Write and solve the equation for spending exactly \$48: $12 + 4n = 48$.
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2. Write and solve the inequality for not spending more than \$50: $12 + 4n \leq 50$.
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3. Share your own 2-item budget scenario and its equation.

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- 4. Why might a real budgeting question be better represented by an inequality than an equation?**
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