

Weatherization Assistant Example Setup Library Calculations
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NEAT INSULATION

R-11 Insulation

- Insulation Cost
 - Bag of insulation costs \$20
 - For R-11, bag covers 200 ft²
 - Insulation cost is $\$20/200 \text{ ft}^2 = \$0.10/\text{ft}^2$
- Labor Cost
 - House with 1000 ft² attic
 - 2 crew members take four hours each to insulate the attic
 - Crew cost is \$30/hour
 - Total labor cost is $(2 \text{ crew}) \times (4 \text{ hours/crew}) \times (\$30/\text{hour}) = \$240$
 - Labor cost per ft² is $\$240/1000 \text{ ft}^2 = \$0.24/\text{ft}^2$

R-19 Insulation

- Insulation Cost
 - Bag of insulation costs \$20
 - For R-19, bag covers 100 ft²
 - Insulation cost is $\$20/100 \text{ ft}^2 = \$0.20/\text{ft}^2$
- Labor Cost
 - House with 1000 ft² attic
 - 2 crew members take six hours each to insulate the attic
 - Crew cost is \$30/hour
 - Total labor cost is $(2 \text{ crew}) \times (6 \text{ hours/crew}) \times (\$30/\text{hour}) = \$360$
 - Labor cost per ft² is $\$360/1000 \text{ ft}^2 = \$0.36/\text{ft}^2$

Check for Consistency

Insulation Level	Insulation Cost (\$/ft²)	Labor Cost (\$/ft²)
R-11	0.10	0.24
R-19	0.20	0.36
R-30	0.30	0.50
R-38	0.40	0.62
R-49	0.50	0.72

NEAT WINDOW REPLACEMENT

20" X 40" Window

- Window is = 60 UI (United Inches)
- Window manufacturer says window cost is \$2/UI
- Cost of window is $60 \text{ UI} \times \$2/\text{UI} = \120
- Window area is $20 \text{ in} \times 40 \text{ in} = 800 \text{ in}^2$
- Window area converted to ft^2 is $800 \text{ in}^2 / (144 \text{ in}^2/\text{ft}^2) = 5.56 \text{ ft}^2$
- Cost per ft^2 is $\$120 / 5.56 \text{ ft}^2 = \$21.60/\text{ft}^2$

36" X 48" Window

- Window is = 84 UI (United Inches)
- Window manufacturer says window cost is \$2/UI
- Cost of window is $84 \text{ UI} \times \$2/\text{UI} = \168
- Window area is $36 \text{ in} \times 48 \text{ in} = 1728 \text{ in}^2$
- Window area converted to ft^2 is $1728 \text{ in}^2 / (144 \text{ in}^2/\text{ft}^2) = 12 \text{ ft}^2$
- Cost per ft^2 is $\$168 / 12 \text{ ft}^2 = \$14/\text{ft}^2$

Average Cost

- $(21.60/\text{ft}^2 + \$14/\text{ft}^2) / 2 = \$17.80/\text{ft}^2$