Solved Word Problem

Farmer Harper has a rice stink bug problem. He needs to spray 500 acres with Sevin XLR Plus at 1 quart/acre. Sevin XLR Plus contains 4 lb of active ingredient (carbaryl) per gallon. The aerial service will charge Harper $6.50/acre to spray. Sevin XLR Plus costs $65 for 2 ½ gal. How much money will Harper spend to control his rice stink bug problem and how much active ingredient will Harper apply on 500 acres?

Answer:

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\frac{\$65}{2.5 \text{ gal}} = \$26/\text{gal}
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1 \text{ qt/acre} \times 500 \text{ acres} = 500 \text{ qts} = 125 \text{ gal}
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125 \text{ gal} \times \$26/\text{gal} = \$3250 \text{ for material}
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\$6.50/\text{acre} \times 500 \text{ acres} = \$3250 \text{ for application}
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\text{Total cost to spray 500 acres} = \$6500
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125 \text{ gal} \times 4 \text{ lb active ingredient/gal} = 500 \text{ lb of carbaryl for 500 acres}
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