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## Extended-Response Test

Demonstrate your knowledge by giving a clear, concise solution to each problem.
Be sure to include all relevant drawings and justify your answers. You may show your solution in more than one way or investigate beyond the requirements of the problem. If necessary, record your answer on another piece of paper.

1. A furniture store offers a certain amount of money off of a future purchase that is proportional to the amount spent in the store. Suppose Tenecia has $\$ 2000$ to spend on new furniture.
a. Complete the table to show how much savings on future purchases Tenecia would receive for different possible amounts spent on furniture.

| Amount Spent on <br> Furniture | Savings on <br> Future Purchase |
| :---: | :---: |
| $\$ 400$ | $\$ 48$ |
| $\$ 800$ |  |
| $\$ 1200$ |  |
| $\$ 1600$ |  |
| $\$ 2000$ |  |

b. Write the ratio of savings to amount spent as a fraction in simplest form.
c. Tenecia finds a sofa she would like to buy for $\$ 900$. Tenecia thinks her savings on a future purchase will be $\$ 108$. Is she correct? Explain.
2. The directions on a barrel of fertilizer indicate that one barrel is enough to fertilize 1.5 acres. Explain how to find the number of barrels of fertilizer needed for 42 acres.
3. The blueprints for a new barn have a scale of $\frac{1}{2}$ inch $=1$ foot. A farmer wants to make sure she will have enough room for 12 new horse stalls to fit along one of the barn walls. Each stall has a width of five feet. If the blueprint of the barn is 20 inches by 30 inches, will there be enough room for the stalls?
4. A telemarketing group sells, on average, one newspaper subscription for every 35 people they call.
a. If the group calls 700 people in one month, how many subscriptions would they expect to sell?
b. How many calls should the group make to reach a monthly sales goal of 300 subscriptions?

