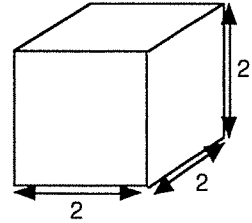

Being Building Blocks

This problem gives you the chance to:

- work with area and volume
-

Barbara's baby brother, Billy, has a set of building blocks.

Each block is 2 inches long, 2 inches wide, and 2 inches high.



1. How many faces does the block have? _____

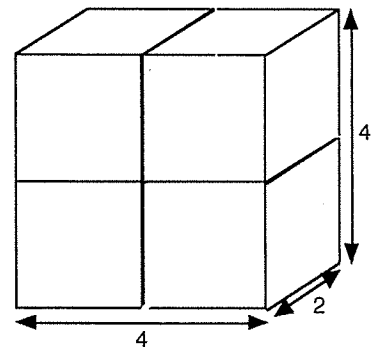
2. What is the volume of the block? _____ cubic inches

Show how you figured this out.

3. Billy has built this shape from his $2 \times 2 \times 2$ blocks.

a. What is the surface area of the shape?
_____ square inches

Show how you figured this out.



b. What is the volume of the shape? _____ cubic inches

Explain how you figured this out.

Ice Cream

This problem gives you the chance to:

- construct a block graph from data
- interpret a graph and calculate mean values

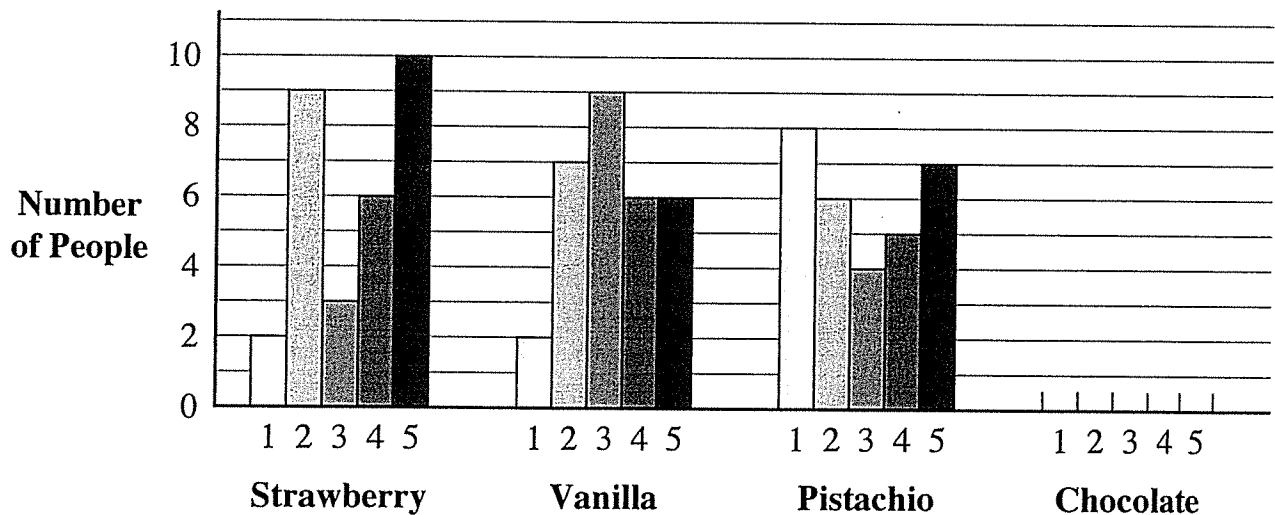
Max is planning to sell ice cream at his school.

He first conducts a small survey to find out which flavors people prefer.

He asks people to rate each flavor on this 5-point scale.

1	2	3	4	5
Hate it	Dislike it	OK	Like it	Love it!

The graph below shows some of the results from his survey.



1. Here are the ratings Max got for chocolate. Use them to complete the graph.

5, 5, 4, 1, 2, 2, 2, 3, 4, 4, 4, 2, 2, 4, 4, 5, 5, 3, 4, 4, 4, 5, 5, 4, 4, 5, 5, 2, 2, 3

2. Max decides to calculate the average (mean) rating for each flavor. Complete the table below:

Flavor	Average (mean) rating
Strawberry	3.4
Vanilla	3.2
Pistachio	
Chocolate	

3. If Max had to pick one flavor to sell, which one should it be?

Truffles

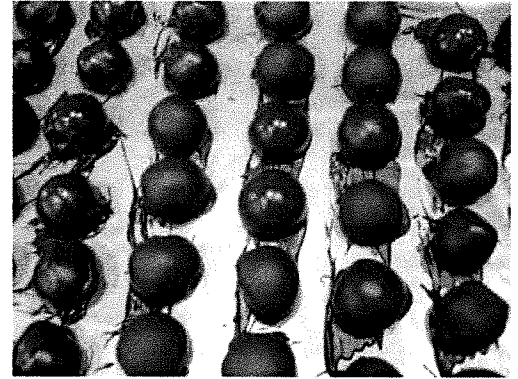
This problem gives you the chance to:

- do calculations in a real situation
-

Linda makes chocolate truffles.

The recipe for 20 dark chocolate truffles is

1 cup cream
2 cups dark chocolate



1. Complete the recipe for 40 dark truffles

_____ cups cream

_____ cups dark chocolate

2. One day, Linda has 8 cups of dark chocolate and plenty of cream.

How many truffles can she make? _____

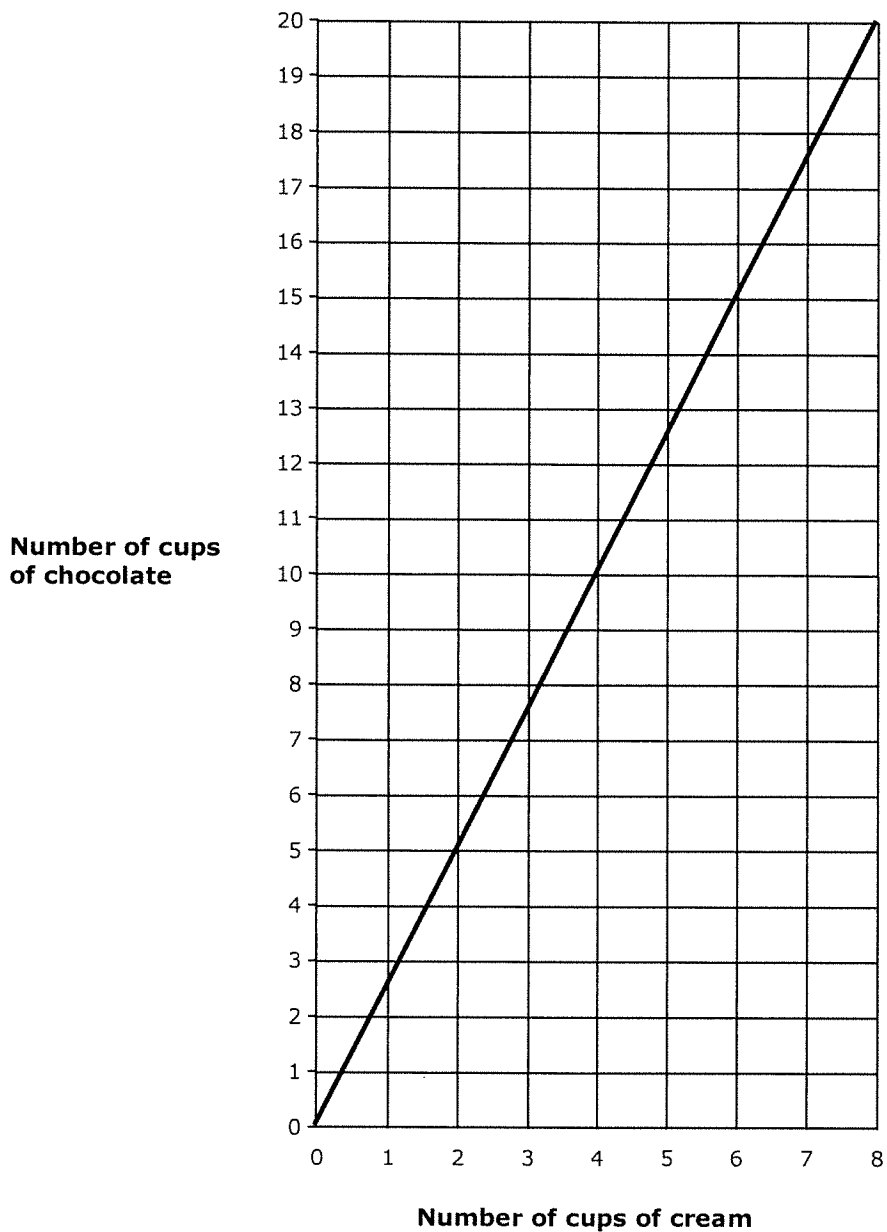
Explain how you figured it out.

3. The recipe for Super Truffles is different. The graph on the next page shows how much cream and chocolate to use.

How much chocolate does Linda need for two cups of cream?

4. How much cream does she need for 15 cups of chocolate?

Super Truffles



5. Write a rule that Linda can use to figure out how many cups of chocolate she needs for any number of cups of cream when making Super Truffles.
