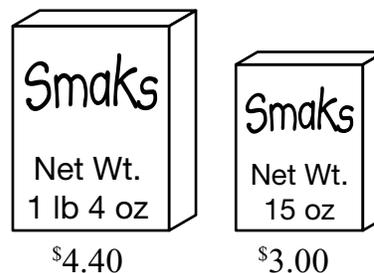


## 5th Grade Sample Problems

97. The pictures show the prices of two boxes of cereal.

- What is the difference in weight of the cereal in the two boxes?
- How many 5-oz servings will each box provide?
- For the bigger box, what is the cost of a 5-oz serving?
- For the smaller box, what is the cost of a 5-oz serving?
- Which box is the “better buy”?



100. Eight parents have volunteered to work in the concession stand during a basketball tournament this Saturday. They will all work the same number of hours. The stand will be open from 7 a.m. until 11 p.m. There must be 3 people working in the stand at all times.

- How many hours will the stand be open?
- If there had to be just 1 person in the stand all the time, how many hours would each parent have to work?
- Since there must be 3 people in the stand all the time, how many hours must each person work?

243. During her exercise program this morning, Millie ran at an average speed of 8 miles-per-hour.

(This means that, if the total distance that Millie ran had been “spread out evenly” for the whole time that she was running, she would have been running at a steady rate of 8 miles-per-hour. It doesn’t mean that she was really running at that speed the whole time. In fact, we don’t know anything about how fast she was running at any particular time. She may have gone very fast for part of the run, and very slow for part of it. All we know for sure is that when her total distance was “spread out equally”, or divided by, her total time, the result was 8 miles-per-hour.)

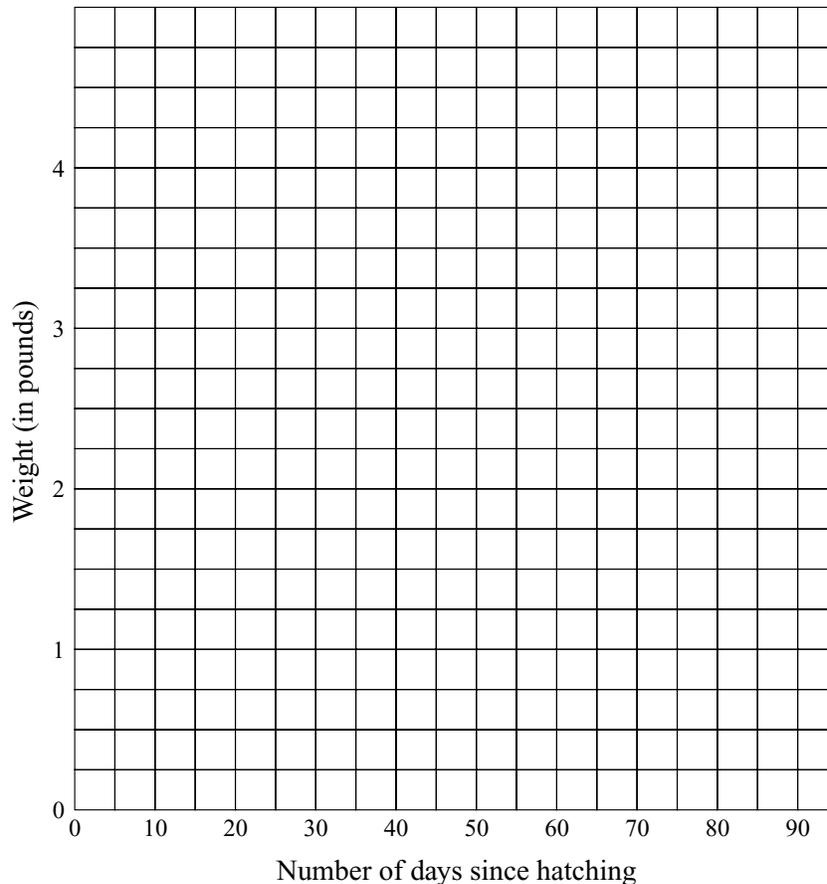
Millie ran for 45 minutes this morning. How far did she run?

**150.** The chart below shows the average weight of chickens raised at Bryson Poultry, Inc.

Number of days after hatching	10	20	35	50	70	85	90
Weight (in pounds)	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	3	$4\frac{1}{2}$	$4\frac{3}{4}$

- What two quantities are related in this chart?
- On the copy of this coordinate grid which your teacher gives you, fill in the number scale on the left side.
- Plot the data points from the chart.

Bryson Poultry, Inc.

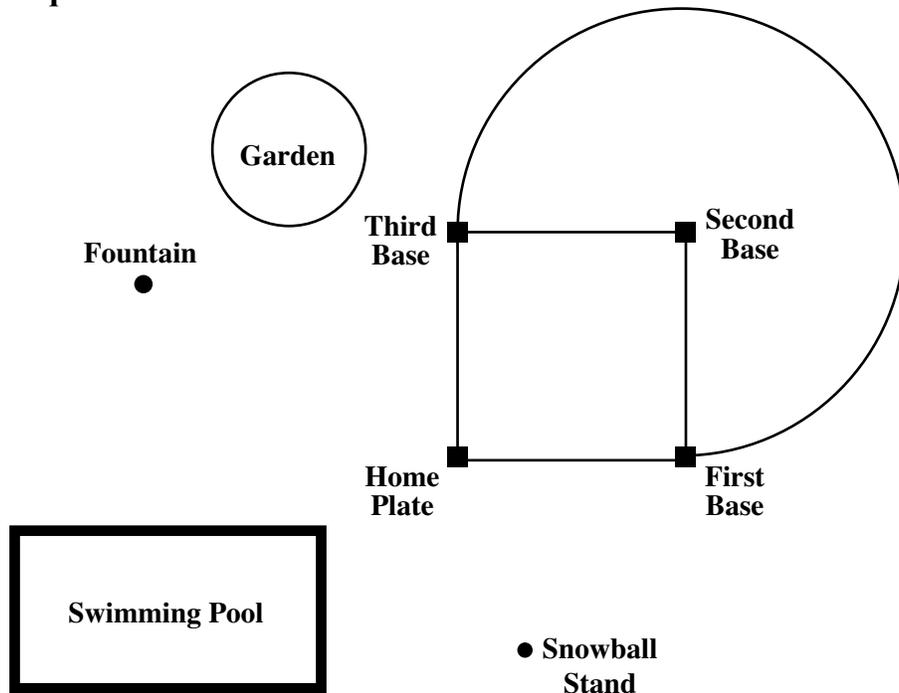


- Connect the points from left to right by drawing a “dotted” segment between each pair of points.

We use dotted segments to emphasize that we only know the weights of the chickens for the 7 numbers of days given in the chart. We don't know their weights between those days.

**174.** Remember that a map always has a scale. It tells us that each inch or centimeter on the map represents some number of yards or miles or kilometers in the real world.

Each centimeter on this map represents 5 yards in the park. Use your ruler to answer these questions.



- How far is it from the fountain to the Snowball Stand along a straight path on the map?
- What is the actual distance from the fountain to the Snowball Stand along a straight path in the Park?
- What is the diameter of the garden on the map?
- What is the approximate circumference of the actual garden?
- The Baseball Diamond is a square. What is the length of each side on the map?
- If Joe hits a home-run, and runs all around the diamond, how far does he run?
- What is the length and width of the swimming pool on the map?
- What is the actual area of the real swimming pool?

All the distances on the map are drawn in whole numbers of centimeters (accurate to tenth-centimeter); so everyone should get the same answers for these questions.

**(279.)** It costs 37¢ to mail a letter or package which weighs 1 ounce or less. For each additional ounce or portion of an ounce, 15¢ more postage will be added.

Find the cost of mailing a letter or package of each of the weights below:

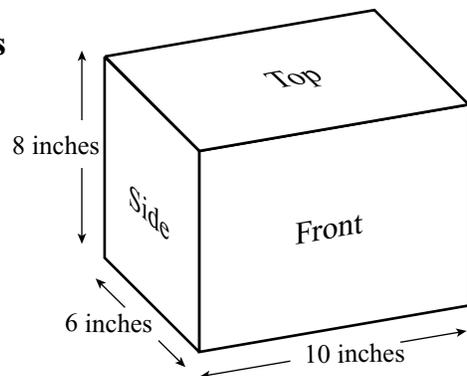
- a. 13.1 ounces      b.  $1\frac{3}{8}$  pounds      c. .98 ounces      d.  $\frac{3}{4}$  pound

**257.** A movie started at 1:30 pm and ended at 4:10 pm. How long did the movie last? (Write your answer in three different ways by filling in the missing numbers below.)

\_\_\_\_\_ hours \_\_\_\_\_ minutes ; \_\_\_\_\_ hours ; \_\_\_\_\_ minutes

**(280.)** The picture at right shows some measurements for a rectangular box.

- a. What is the area of the top of the box?  
b. What is the area of the front of the box?  
c. What is the volume of the box?



**(297.)** a. Write an equation to represent each story. Be sure to put labels on all quantities.

Use a letter to stand for the unknown number in each equation.

- i. Mr. Taylor got a \$735 tax refund this year. He used part of it to buy a \$196 printer, and part of it to buy a \$248 lawn mower. How much of the refund is left?  
ii. The area of a rectangular porch is 364 square feet. The porch is 14 feet wide. How long is it?
- b. Find the answer to the question in each story.
- c. Did you use your equations to find the answers to the questions? If not, explain what you actually did to find the answers.