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Multistep Problems

Many real-life problems involve multiple steps. Often you need to find one number that you will use to find the answer. That's why planning how to find the solution is so important. You need to think carefully about what to do first, next, and last.

Try this problem. Think about the individual steps of the problem.

- 13** At the 8:30 show, there are 70 adults, 30 seniors, and 100 children. How much money do the ticket sales for the 8:30 show bring in?

A What do you want to find out?

B What information do you know?

C What do you need to do first? What operation will you need?

D How can you find the total cost of adult tickets?

E How can you find the total cost of senior tickets?

F How can you find the total cost of children's tickets?

G How can you find the total cost of tickets for the 8:30 show?



- H** Locate the information you need and solve the problem. Show your work for each step.

Here's another problem to try on your own.

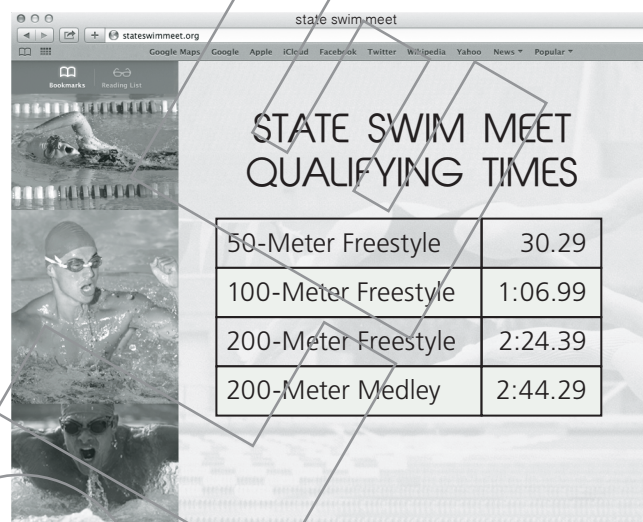
- 14** At the 6:15 show, there are 12 seniors and 75 adults. The rest of the moviegoers are children. How many children are at the 6:15 show? Show your work for each step.

11 Swim Meet

Mike is on the city swim team. He hopes to qualify for the state swim meet. To compete, he must be able to swim each event in the qualifying time listed.

Mike's best time in the 100-meter freestyle event is 67.88 seconds. In the 200-meter medley, his best time so far is 164.41 seconds.

In today's meet, Mike is swimming the 200-meter medley. The backstroke laps take him 43.4 seconds, the breaststroke laps take 49.3 seconds, and the butterfly laps take 41.36 seconds. The last laps are freestyle.



50-Meter Freestyle	30.29
100-Meter Freestyle	1:06.99
200-Meter Freestyle	2:24.39
200-Meter Medley	2:44.29

Solve each problem. If there is not enough information to solve it, tell what is needed.

- 1 How much time does Mike need to cut from his best 100-meter freestyle time to qualify for the state meet?

The qualifying times are listed in minutes and seconds.

- 2 How many minutes and seconds is Mike's best 200-meter medley time?

3 How much longer is the state qualifying time for the 200-meter medley than for the 200-meter freestyle?

4 The pool where Mike practices is 25 meters long. How many laps does it take him to swim 200 meters?

A lap is once across the pool.

5 Each lane in the pool is 2.13 meters wide. How wide is the pool?

6 In the 200-meter medley for today's meet, how fast must Mike swim the freestyle to qualify for the state meet? Explain why your answer is correct.

The medley consists of backstroke, breaststroke, butterfly, and freestyle.

- 7 At today's meet, Mike's freestyle laps in the 200-meter medley take him 30.21 seconds. Does he qualify for the state meet? If so, by how much?

What is the time he must match or beat?

8

At swim practice, the team swims all four strokes of the medley: 1) backstroke, 2) breaststroke, 3) butterfly, and 4) freestyle. In how many different orders is it possible to practice the four strokes? Make an organized list or a tree diagram to find the answer.

Use the numbers to identify the strokes.