

Chapter 1-5 Notes: Problem Solving Strategies

Common Problem Solving Strategies

Look for a Pattern

- analyze the first few numbers and identify the rule that is used to go from one number to the next.

Guess, Check, and Revise

- make a reasonable guess and check it. Use the results to improve your guess until you arrive at the solution.

Make a Table

- Use a table to organize information.

Work Backward

- Begin with the end result and undo steps to find what happened earlier.

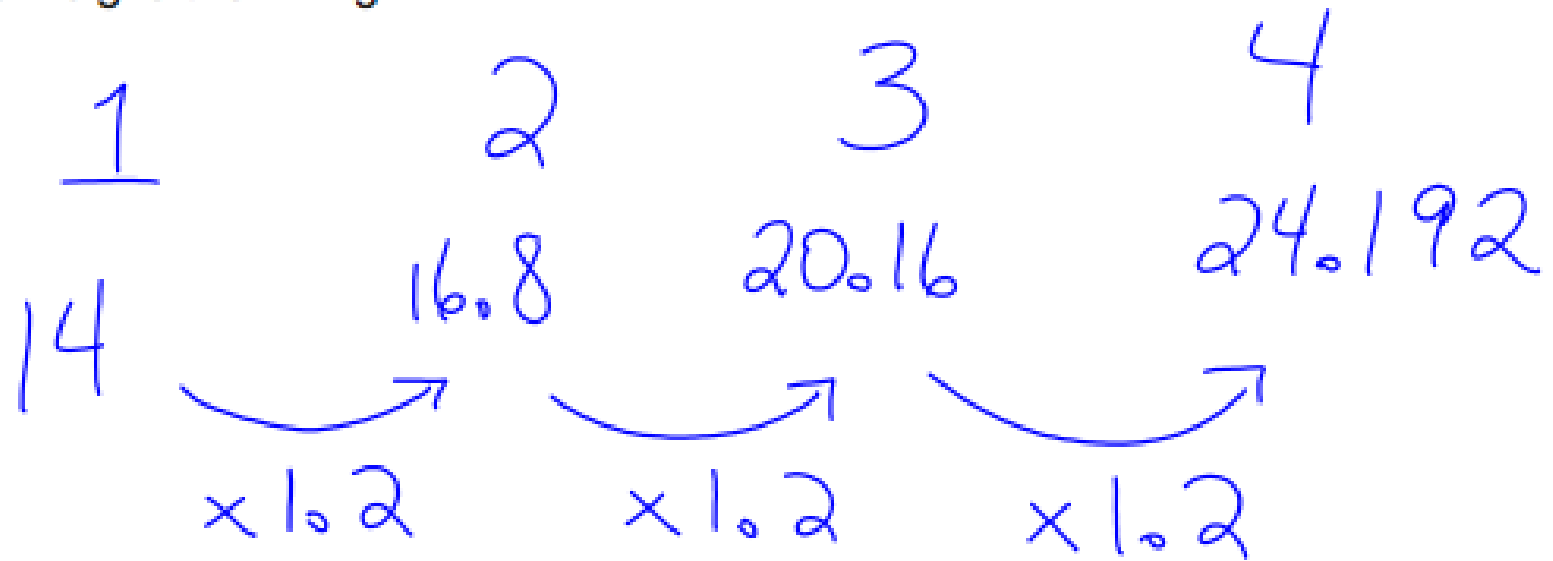
** organizing data into tables/lists is helpful before using *look for a pattern* and *guess, check, and revise* strategies

Example 1: A wildlife habitat houses 41 animals. There are 3 more reptiles than mammals in the habitat. There are 7 fewer amphibians than mammals in the habitat. How many of each type of animal are in the habitat?

m	$m+3$	$m-7$	41	
10	13	3	26	too low
20	23	13	56	too high
15	18	8	41	

Guess
and
check

Example 3: A ripple in a pond increases by 1.2 its size with each ring. If the first ring is 14 inches, how big is the 4 ring?



pattern

Example 4: Kayla bought a book of tickets for rides at the carnival. She had one-third of the tickets left after she rode the Hammer and Tilt-a-Whirl. She used 12 tickets to ride the Ferris Wheel. Now she has 13 tickets. How many tickets were in the book of tickets Kayla bought?

work backwards

$$13 + 12 = 25 \times 3 = 75$$

tickets