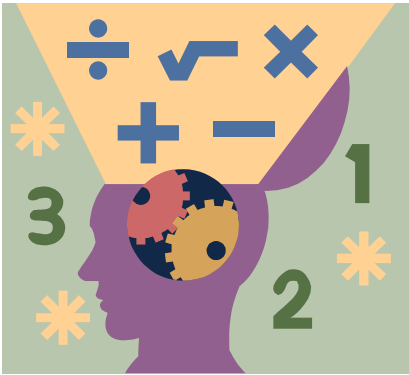


SABES Math Initiative Problem Set 1

April 2006



Welcome to the world of interesting problems. These problems are shared for a variety of reasons. The problems may:

- Offer a variety of solutions
- Stimulate thinking
- Connect with daily life
- Act as communication gateways

Classroom Connection

How you use these problems in your classroom depends on your students, classroom structure, and learning objectives. Consider the following options:

- Post as “Problems of the Week”
- Include as supplemental problems when working on particular math strands – number sense, data and statistics, geometry and measurement, and algebra
- Present as collaborative problem-solving opportunities
- Use as springboards to discuss various problem-solving strategies – guess and check; draw; use manipulatives; work backwards; try a simpler problem, etc.
- Assign as “share problems” that students bring home to share with friends and families and bring solutions back to the classroom for sharing



Problem Solving Tips

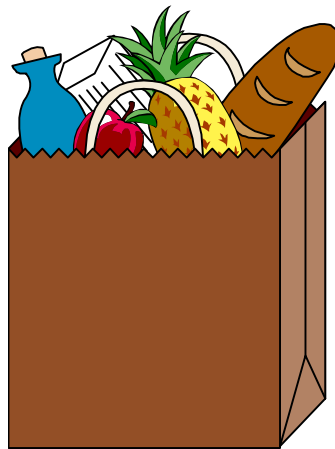
When guiding students in a problem solving exercises, it can help to:

- Work in pairs or small groups.
- Have available objects to represent items in the problem.
- Provide graph paper, as well as plenty of scrap paper.
- Provide measuring tools.
- Share and compare solution methods.
- Categorize problems. (Ex. This involves “proportion;” this involves “multi-steps,” etc.)
- Maintain a vocabulary list.
- Promote the use of diagramming.
- Encourage students to re-state the problem in their own words.
- Take dictation on how students’ solved problems if writing is an issue.
- Create a bank of ‘similar problems’ written by students to share with your classes.
- Connect the problem to situations in students’ lives.



The Deli Problem

You are on a diet and can have only $\frac{1}{4}$ pound of turkey breast for dinner. You go to the deli where the clerk hands you three slices of turkey breast. The package weighs $\frac{1}{3}$ pound. How many slices can you eat?



How did you solve this problem?

Is there another way to solve this problem? How?

Write a similar problem here then solve it.



Buy and Sell



Sonya bought some lollipops to make money for a gift she wanted to buy. She paid \$6.00 for every 12 lollipops she bought. Later, Sonya was charging \$6.00 for 8 of them. She sold them all and made a profit of \$12.00. How many lollipops did Sonya buy and sell? Show all your work.

How did you solve this problem?

Is there another way to solve this problem? How?

Write a similar problem here then solve it.



What's My Number?

- I have four digits.
- All the digits are different.
- The digit in the thousands place is 3 times the digit in the tens place.
- The number is odd.
- The sum of the digits is 27.

What's My Number?



How did you solve this problem?

Is there another way to solve this problem? How?

Write a similar problem here then solve it.



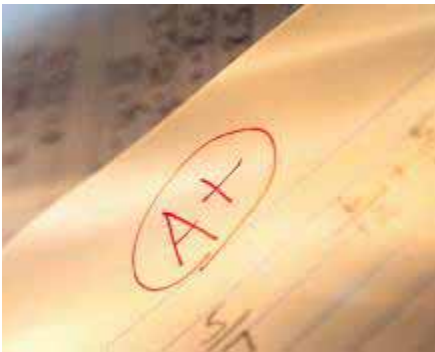
How to Raise an Average

Shiril scored a 95 on his last test. This raised his average by 1 point to 89. What must he score on his next test to raise his average to 90? Show all your work.

How did you solve this problem?

Is there another way to solve this problem? How?

Write a similar problem here then solve it.



Fractions, Fractions, Fractions

A half is a third of it. What is it?

Show all your work.



How did you solve this problem?

Is there another way to solve this problem? How?

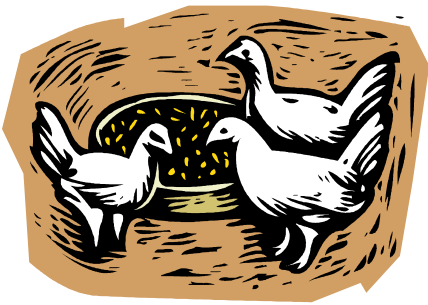
Write a similar problem here then solve it.



Hens and Eggs

If 3 hens lay 4 eggs in 5 days, how many days will it take a dozen hens to lay 8 dozen eggs?

Please round your answers to the nearest day (or egg, if needed). Show all your work.



How did you solve this problem?

Is there another way to solve this problem? How?

Write a similar problem here then solve it.

