Commentary

Grade 3, XXIV

1. **(6)** Students might work backwards by asking "What number, when 4 is subtracted, gives 20 -- it's 24. What number, when 6 is added, gives 24 -- it's 18. What number do I multiply by three, to get 18 -- it's 6." Another way to solve the problem is to *guess-check-revise.*

2. **(25)** The pattern involves the *square numbers.* These are the numbers 1, 4, 9, 25, 36, and so on. Students might want to draw the next square, which would have 5 small squares on each side.

3. **(yes)** They weigh 391 pounds all together, so they could all get in the boat that holds 400 pounds.

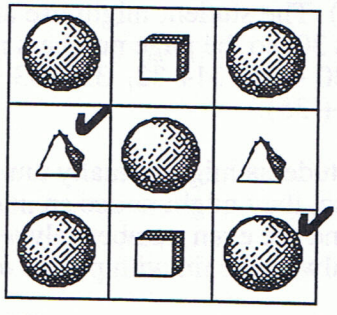
4. **(See chart below.)** Each pencil weighs 3 ounces, so the left-hand pan has 9 ounces. Therefore the ruler and glue together weigh 9 ounces. The student has to find different ways to have 9 ounces. Most will not choose fractions, although that is possible.

ruler	glue
1	8
2	7
3	6
4	5
5	4
6	3
7	2
8	1

Give 1 star for every 2 answers. They may not be arranged in an orderly fashion, as they are in this chart.

5. **(16)** The number of holes doubles with each fold. The problem can be extended to several more folds.

6. The two missing figures are checked. If the students come up with a different pattern, have them justify their solution.



7. **(65)** Give this problem: 36 + 29

8. **(a. 0.01 and $\frac{1}{100}$; b. 0.10 and $\frac{10}{100}$; c. 0.05 and $\frac{5}{100}$; d. 0.25 and $\frac{25}{100}$)**
This problem is accessible to students if they think of writing the coin values using a dollar sign. Students might give other fractional names than the ones above, such as 1/10, 1/20, and 1/4 for the dime, nickel, and quarter, respectively.