Commentary

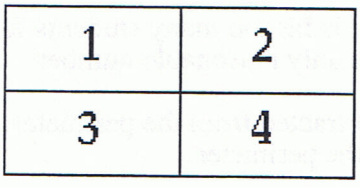
Mars, V

1. **(5,738)** The purpose of this problem is for students to unscramble the place values before writing the answer. Students can use a place value chart to check their number.

2. **($\frac{5}{12}$)** There are 12 marbles in the bag. Since there are 5 red marbles, then there is a 5 in 12 chance of pulling out a red marble. "Five in twelve" can be written as the fraction $\frac{5}{12}$.

3. **(7)** The 2 absent students can be removed from 30, which leaves 28. Then the situation becomes a division problem: 28÷ 4 = 7. The student could use counters or marks to "act out" the last part of the problem -- taking 28 counters and removing them in groups of four, asking *how many groups are removed* -- as many students will not have met division yet..

4. **(9)** Numbering the small rectangles provides an organized way to count them.



1 big rectangle - 1&2&3&4
4 small rectangles - 1, 2, 3, 4
4 medium rectangles - 1&2, 3&4, 1&3, 2& 4

5. **(25)** Students might write the numbers less than 40 as they count by 5: *5, 10, 15, 20, 25, 30, 35* . The sum of the digits adding to 7 means that 25 is the number.

6. **(6)** From the top left scale, taking half of each side means that 2 marbles balance 1 tape dispenser. So 2 marbles can be substituted for the tape dispenser in the top right scale, giving that 2 marbles balance 4 pencils. This means each marble balances 2 pencils. Therefore 3 marbles balance 6 pencils. This type of thinking is a precursor to algebraic thinking in that students gain an intuitive notion of substituting equal quantities for other quantities, multiplying or dividing both sides of a balanced situation by the same amount, and so on.

7. **(3)** Dan has $3.00 left to spend ($20.00 - $17.00). Each disk costs 90¢ which is almost a dollar each. So the student reasons he can get 3 disks with the remaining $3.00. The more advanced student might multiply $0.90 times 3 which is $2.70.

8. **(4 measures long; 3 measures wide)** (Paper size being 8 1/2 inches by 11 inches.) Students might mark the length on a piece of paper and use it to measure. Making a small mark at the end of each measure will help them count the number of times they measure.