

Commentary

Jupiter, XXI

1. **(a. 6th and 12th; b. 1st, 5th, 7th, and 11th)** Students can draw the 12 steps, and the two animals jumping, as a concrete way to solve the problem. Or they might simply list the steps that each will land on and find the answer that way. Some might write the numbers from 1 to 12, and write “C” or “F” above each number is the cricket or flea lands on it.
2. **(\$230)** This will probably be a two step problem. Students will probably divide 92 by 2 and then multiply that quotient by 5.
3. **(\$230,000,000.00 or \$230,000,000)** In this answer, look for the dollar sign and the correct number of zeros.
4. **(a. drier; b. 2.76; c. 67)** Part (a) simply involves comparing the 1995 bar with the “normal” bar. Part (b) involves subtracting 1.43 from 4.19; part (c) requires students to subtract 1928 from 1995.
5. **(118)** Students may draw a picture; there are 10 bricks ($10 \times 10 \text{ cm} = 100 \text{ cm}$) and 9 sections of mortar ($9 \times 2 \text{ cm} = 18 \text{ cm}$). The total is then $100 \text{ cm} + 18 \text{ cm}$.
6. **(more than)** The total number of calories listed is 2217. Some students will be able to estimate accurately that the calories sum to more than 2000, without actually getting the total number of calories accurately.
7. **(6)** Out of the 36 ways the dice can land, these ways give a sum of 7: (1,6), (6,1), (2,5), (5,2), (3,4), (4,3).
8. **(b. 25 million)** Students can convert 25,000 miles into 132,000,000 feet using a calculator. If the average person is 5.5 feet tall, this number can be divided into 132,000,000 to get 24 million people necessary. An average height of 5 feet would result in a little more than 26 million people. Therefore the most reasonable answer is about 25 million.