

# Commentary

## Earth, IX

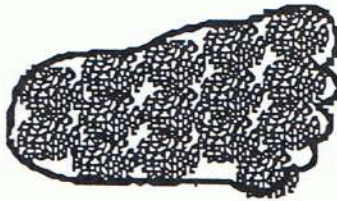
1. **(6 hours)** It is helpful to draw a picture of the lizard's trip. At hour 1, the lizard started at 0, went up to 2, and down to 1. At hour 2, the lizard started at 1, went up to 3, and down to 2. At hour 3, the lizard started at 2, went up to 4, and down to 3. At hour 4, the lizard started at 3, went up to 5, and down to 4. At hour 5, the lizard started at 4, went up to 6, and down to 5. At hour 6, the lizard started at 5, went up to 7, and climbed out!
2. **(4 hours)** The essence of this problem is to know that Howard watches T.V. from 11:15 to 12:15, from 12:30 to 1:30, and from 5:30 to 7:30. The first and second times he watched for an hour each, and the third time for 2 hours, totalling 4 hours in all.
3. **(\$10)** A student can use a calculator, but many won't need one. Intuitively they can add \$2.50 to itself to get \$5, twice, and  $\$5 + \$5$  is \$10. It would be interesting to see the other strategies that students use on this problem.
4. **(b. less than 50 grams)** If the hot dog and bun were exactly 50 grams, the scale would be even. Since the 50 gram weight is lower it must be heavier. Therefore, the hot dog and bun must be less than 50 grams.

5.



The pattern repeats after every four figures. The 15th figure, then, will be identical to the 3rd figure. Some students will recognize this, but some may need to draw each figure out to the 15th.

6. **(accept between 13 and 21 as an answer.)** The figure below shows 15 thumb prints, which cover the footprint but with some "holes." The problem should encourage estimation since an exact answer can't be obtained by the students.



7. **(16)** Since students do not know how to divide yet, they will try a number of different strategies to find the answer. One is to ask yourself "what number taken twice will give a sum of 32?" Students might try a few numbers and see.