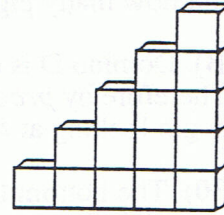


Commentary

Earth, XV

- (15) The problem is one with extraneous information. Many students want to do something -- add or subtract -- the numbers 27 and 18, because those are easily recognized. These students might be encouraged to draw a diagram of the kids and the adults, including 12 kids in the egg-toss contest.
- (15) Students can either make the next two sets of steps in the pattern to get one five steps high, or they can draw it and count. Such a set is shown to the right.



- (a. Thursday; b. Friday; c. Tuesday and Wednesday) For part a, 21 is the highest number, so the day must be Thursday. For part b, find "11" on the chart, look across and see Friday. For part c, $15 + 10 = 25$, so Tuesday and Wednesday are correct.
- ◆ Let p stand for plane, h for heart, and d for diamond. The pattern repeats every six times: p, h, d, p, d, h , etc. Some students will think of the pattern as one which repeats after three figures, with the 2nd and 3rd figures (heart, diamond) alternating which comes first.

5.

Pennies	Nickels	Dimes
15	0	0
10	1	0
5	2	0
5	0	1
0	3	0
0	1	1

These can be in any order. Encourage students to make combinations of real dimes, nickels, and pennies to fill in the chart.

- (The circle is cut into thirds.) Students may see the pattern as the first circle cut into sixths, the second circle cut into fifths, the third circle cut into fourths, and the next circle cut into thirds.
- (b) It is more likely to land *down* than *up*. The thumbtack landed *down* 68 times; it landed *up* only 32 times. It seems likely from this experiment to land *down* about twice as often as *up*.
- (see below)

6	+4	10	-3	7	+4	11	+8	19
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