

Commentary

Jupiter, XII

1. **(16)** Students may need help recognizing that the snail is climbing and then falling. Students may draw pictures or use a number line. Some students will think the answer is 20 days because of the snail making progress at the rate of 1 foot per day, but this discounts the fact that once the snail reaches the top on the 16th day, it won't fall back four feet that night.
2. **($\frac{3}{4}$, 75%)** The circle is divided equally into four regions, so the chance of landing on each of those regions is $\frac{1}{4}$. The chance of landing on any of the three of them is then $\frac{3}{4}$.
3. **(\$12.50)** Some students will find half of \$25 as \$12.50, and then subtract that amount from \$25 and get \$12.50 again. Others will simply say that if the item is on sale for $\frac{1}{2}$ off, the price you pay is also $\frac{1}{2}$ of the price showing.
4. **(81)** Students may want to use a calendar, or set up a chart, in order to solve this problem. There would be 20 days left in October, 30 in November, and 31 in December.
5. **(180)** Students may use the *guess-check-revise* approach. The 2nd clue says the number is in the hundreds. It is possible to then write down the multiples of 12 that are in the hundreds, and check to see which are also multiples of 9 in which the units digit is less than the tens digit.
6. **(a. 180,000; b. 15,000; c. 3)** Part (a) involves multiplying 10,000 and 18; part (b) involves dividing the answer for (a) by 12; part (c) involves dividing (b)'s answer by 5280, and rounding 2.84 miles to the nearest whole number, 3.
7. **(50)** Students should divide 800 by 16, which is the number of hours the person is awake and burning calories by fidgeting.
8. **(\$15)** \$10 for 100 pretzels means his cost per pretzels is 10¢ each. If he sells them for 25¢ each, he makes a profit of 15¢ per pretzel. Therefore 100 pretzels would bring a profit of $100 \times 15\text{¢}$ or \$15. Another solution: when you sell 100 giant pretzels for 25¢ each you make \$25. If they cost you \$10, your profit is \$15.