

Commentary

Jupiter, XVIII

1. **(4 out of 52, 2 out of 26 or 1 out of 13, which could also be written as a fraction ($\frac{4}{52}$, e.g.), a decimal (approximately 0.08), or a percent (8%))** Out of each suit, there are two cards that are multiples of 5, the 5 and the 10. There are two red suits, diamonds and hearts. Therefore there are four such cards, out of 52 in the deck.
2. **($\frac{3}{8}$)** The two pizzas shown have not been divided into eighths yet, as pizzas normally are. The student can divide them this way and see that Dad ate 6 pieces, Jenny ate 1 piece, Danny ate 2 pieces, and Mom ate 4 pieces. Therefore 13 pieces were eaten, leaving 3 pieces. Three pieces is $\frac{3}{8}$ of a pizza.
3. **(15)** Students should solve this problem intuitively, not by trying to use the equation. The equation is there simply for them to associate an equation with a real-life situation. They can *guess-check-revise* to find the weight of an apple, or they can deduce the answer logically as they will be called on later to solve such equations. If three apples and 5 grams weigh 50 grams, then 3 apples by themselves must weigh 45 grams. Therefore each apple weighs $45 \div 3$ or 15 grams.
4. **(26 students)** There is extra information in this problem -- 16 classes. The problem is solved by dividing 104 students by 4.
5. **(even)** Students might want to test this out, by opening a book to several different places and multiplying the numbers on the facing pages with a calculator.
6. **(a. \$9.60; b. 2 hours and 40 minutes)** Students can first multiply each color string by 8, add those products to get 96 and multiply by 10 cents. Or, they might add all the colors together for one bracelet and get 12, and multiply that amount by 8, and then 10 cents. For the second question, students can multiply 20 minutes by 8 and get 160 minutes, and convert that to 2 hours and 40 minutes.
7. **(6 meters)** Students might estimate this amount visually -- the height of a door is about 2 meters, and the width is not quite 1 meter, so the distance around the outside would be about $1 + 2 + 1 + 2$ or 6 meters. Some students might actually measure a door, and find approximately the same dimensions. Most interior doors in houses are about 5.5 meters around the outside, which is closer to 6 meters than any of the other answers.
8. **(11 hours 30 minutes)** The trip from Tallahassee takes the longest. Students will most likely "count up" from the departing time to the arrival time, getting 6 $\frac{1}{2}$ hours, 11 $\frac{1}{2}$ hours, 5 hours, and 8 hours, respectively. On the Tallahassee trip, some might get the time by realizing that a 12-hour trip would go from 7:30 AM to 7:30 PM, and this would be $\frac{1}{2}$ hours shorter than that, giving 11 $\frac{1}{2}$ hours for the trip.