

Two Ways of Modeling Division:

$$26 \div 4$$

FIGURE 10.23 Modeling partitive division: 6.5 caramels is the equal share when 26 caramels are divided evenly among 4 children.

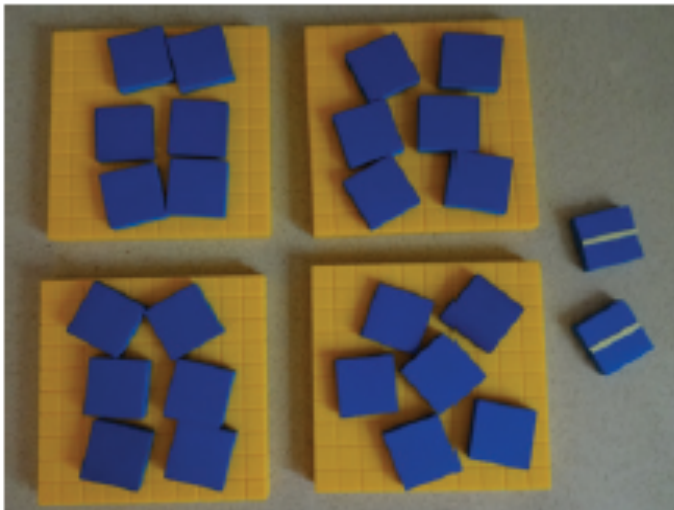


FIGURE 10.24 Modeling quotative division: 7 cars (with 4 seats each) are needed for 26 students to ride the roller coaster together.



Photo by Didier Rousselet

Note that:

- (1) Most students think of the “equal share” (or partitive) division model and forget about the measurement or quotative model;
- (2) Yet it’s the second model that serves students well in “fraction division.” The mathematical equation $8 \div \frac{1}{2}$ has meaning if we think, “How many half-pizza portions can I make out of 8 full pizzas? Answer: 16. Thinking, “I must divide 8 pizzas equally among one-half of a person” has no meaning.
- (3) Discuss the two meanings of “remainder” that emerge from this exercise. Can your students find a third?