

Lesson 6 Practice Problems

1. For each situation, explain whether you think the relationship is proportional or not. Explain your reasoning.

a. The weight of a stack of standard 8.5x11 copier paper vs. number of sheets of paper.



b. The weight of a stack of different-sized books vs. the number of books in the stack.



2. Every package of a certain toy also includes 2 batteries.

a. Are the number of toys and number of batteries in a proportional relationship? If so, what are the two constants of proportionality? If not, explain your reasoning.

b. Use t for the number of toys and b for the number of batteries to write two equations relating the two variables.

$b =$

$t =$

3. Lin and her brother were born on the same date in different years. Lin was 5 years old when her brother was 2.

a. Find their ages in different years by filling in the table.

Lin's age	Her brother's age
5	2
6	
15	
	25

b. Is there a proportional relationship between Lin's age and her brother's age? Explain your reasoning.

4. A student argues that $y = \frac{x}{9}$ does not represent a proportional relationship between x and y because we need to multiply one variable by the same constant to get the other one and not divide it by a constant. Do you agree or disagree with this student?

(From Unit 5, Lesson 5.)

5. In one version of a trail mix, there are 3 cups of peanuts mixed with 2 cups of raisins. In another version of trail mix, there are 4.5 cups of peanuts mixed with 3 cups of raisins. Are the ratios equivalent for the two mixes? Explain your reasoning.

(From Unit 5, Lesson 1.)