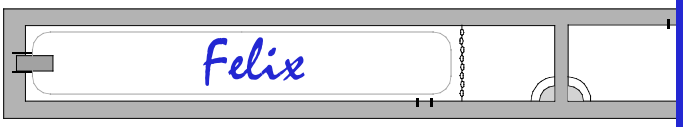
PhyzSpringboard: Ratios



LIKE QUANTITIES

1. What is the meaning of the result of the division problem 35 ÷ 5?

The number of times 5 can be subtracted from 35.

2. Which is the correct representation of the problem above: ___ 35/5 or ___ 5/35?

3. If the number of M&M's® in a fun size bag is *F* and the number of M&M's in a king size bag is *K*, how many fun size bags could be filled using the contents of one king size bag? Answer in the form of a ratio.

K/F

4. Suppose you have any two like quantities, A and B. What is the meaning of the ratio A/B?

The number of times B can be subtracted from A.

5. If there are 20 students for every teacher at school,
a. which is the correct equation relating the number of students [*S*] to the number of teachers [*T*]?
___ $20S = T$ ___ $20T = S$

b. Which equations below are also correct expressions relating the number of teachers and the number of students
___ $S/20 = T$ ___ $T/20 = S$ ___ $20/S = T$ ___ $20/T = S$ ___ $S/T = 20$ ___ $T/S = 20$

UNLIKE QUANTITIES

6. A 253 cm^3 sample of a solution has a mass of 736 g.
a. What is the meaning of 736/253 in this context?

The number of grams in each cubic centimeter of solution.

b. What is the meaning of 253/736 in this context?

The number of cubic centimeters occupied by each gram of the solution.

7. Suppose you have any two unlike quantities, A and B. What is the meaning of the ratio A/B?

The number of units of A for each unit of B.

8. Suppose the calculation 63/18 told me how many cents I had to pay for each ounce of vegetables in a can.
a. What is the price of the can of vegetables?

63 cents

b. How many ounces are there in the can?

18

c. What is the meaning of 18/63 in this context?

The number of ounces of vegetables purchased by each cent of money paid.