

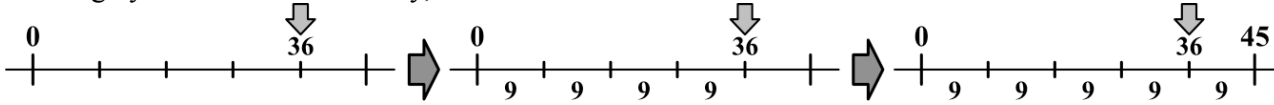
# Fractions of Numbers Homework

Wednesday 12/17/08

Name:  
Homeroom:  
Mr. Z.'s Science Class  
12/17/08

## Figuring out the unit

Sometimes, I need to find out the unit given the value of some fraction of it. In order to solve this, I first draw a number line where the units are split up as required, but the units are not yet labeled. I then figure out the length of the spaces by dividing by the numerator. Finally, I use that to find the unit.



For example, I might want to find the full price of a pair of shoes given that it is on sale for \$36 and that is  $\frac{4}{5}$  of its regular price. I draw a number line where the units are divided into fifths, and label the mark that would be four fifths of a unit as "36". Since that is four spaces from zero, each space is 9 long. That, in turn, lets me figure out that the unit is 45.

1. Below, draw a number line to answer the question: **If 40 is two thirds of some number, what is the number?**

2. Below, draw a number line to answer the question:  $\frac{3}{5} \times ? = 33$

3. A coat costs \$24 when it is on sale for three quarters of the full price. What was the full price?

4. Below, draw a number line to answer the question: **If 40 is five halves of some number, what is the number?**

5. Below, draw a number line to answer the question:  $\frac{8}{3} \times ? = 64$

6. Gasoline now costs  $\frac{7}{4}$  of what it did a year ago. If it costs me \$42; to get a full tank of gas now, how much did it cost before?

7. **Challenge:** Draw two number lines to answer the question: If a sweater costs \$36 when it is on sale for four fifths of the full price, how much would it cost if it were on sale for two thirds of the full price?  
(Hint: find the full price first)