Math 4a. Homework 17.

1. Meters, kilometers, centimeters:

$$1 \, kilometer \, (km) = 1000 \, meters(m)$$
$$1 \, meter = 100 \, centimeters \, (cm)$$
$$1 \, hour \, (h) = 60 \, minutes(min)$$
$$1 \, minute \, (min) = 60 \, seconds(s)$$

Represent speed in km.p.h units and find out who's speeds are there.

a. $83 \dfrac{cm.}{min.}$;   b. $83 \dfrac{m.}{min.}$;   c. $31 \dfrac{m.}{s.}$ d. $83 \dfrac{cm.}{s.}$;   e. $800 \dfrac{m.}{min.}$;

Horse, cheetah, snail, cheetah, turtle.

2. Peter's speed is $5\frac{1}{5} \frac{km}{h}$ (kph). How far will he go in
   a. 2 hours
   b. $1\frac{1}{5}$ hour
   c. 45 minuts
   d. 125 minuts

   (Represent the result in kilometers and meters, for example: 1km 250 m.)

3. A river flows at 3 km/h. It takes same amount of time for a boat to travel 16 miles downstream as to travel 10 miles upstream. What is the speed of the boat in still water?

4. In two rooms, there were 68 people. When 25 people left one room and 35 left the other, the number of people in the rooms remained equal. How many people were originally in each room?

6. The farmer brought a basket of apples to the market. To the first customer, he sold half of all his apples and half an apple more, to the second customer - half of the remainder and half an apple more, to the third - half of the remainder and half an apple more, and so on. However, when the sixth customer came and bought half of the remaining apples and half an apple, it turned out that, like the other buyers, all his apples were whole, and the farmer sold all his apples. How many apples did he bring to the market?

7. Evaluate:

$$\underbrace{\frac{1}{2} + \frac{1}{2} + \cdots + \frac{1}{2}}_{13\ times} + \underbrace{\frac{1}{4} + \frac{1}{4} + \cdots + \frac{1}{4}}_{7\ times} - \underbrace{\frac{1}{100} - \frac{1}{100} - \cdots - \frac{1}{100}}_{25\ times};$$