Math 4b. Homework 16.

1. Meters, kilometers, centimeters:

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

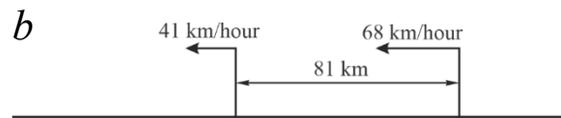Represent speed in km.p.h units and find out who's speeds are there.

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

2. Represent speed:

$36\dfrac{km}{h}$ as $\left(\dfrac{m(meter)}{s(second)}\right)$

$6\dfrac{m}{s}$ as $\left(\dfrac{km}{min}\right)$

3. For the picture, come up with the problem and solve it.

b

41 km/hour   68 km/hour

81 km

distance at the beginning = 81 km.
t meeting –> ? h.

4. A pedestrian covers a distance in 3 hours 45 minutes. The same distance can be covered by bicycle in 45 minutes. How many times faster does a cyclist travel than a pedestrian walk?

5. Evaluate:

a. $\dfrac{6}{7} \cdot \dfrac{7}{12} : \dfrac{5}{16}$;

b. $\dfrac{9}{10} : \dfrac{10}{11} \cdot \dfrac{100}{21}$;

c. $\dfrac{7}{25} : \dfrac{3}{10} \cdot \dfrac{5}{6}$;

d. $\dfrac{\frac{3}{4} + 2}{1 - \frac{3}{4}}$;

e. $\dfrac{\frac{7}{3} - 2}{1 + \frac{7}{3}}$;

f. $\dfrac{1 + \frac{3}{2}}{\frac{3}{2} - 1}$;

6. A number was chosen, increased by 5 times, then decreased by 3, and the resulting difference was halved. The result was a number 0.3 less than the chosen one. What was the chosen number?

7. A rope was folded in half, then in half again, and then in half one more time. Then the folded rope was cut in one place. It broke into pieces. What could have been the length of the rope if, among these pieces, there were two of a known length, one 12 cm, and the other 7 cm?

8. Draw a number line, chose the convenient unit, mark points with coordinates

$$1.2, \quad 2\frac{1}{4}, \quad 3.75, \quad 0.125$$

and points with coordinates, opposite to the numbers above.