

Math 4d. Class work 22.

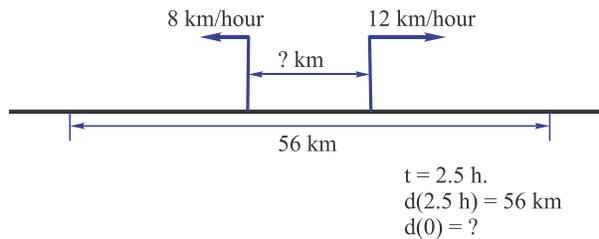
1. Two bicyclists start 100 miles apart, and head towards each other, each one going 10 mph. At the same instant, a fly leaves the first bike and flies at 20 mph to the second. When it gets there, it immediately turns around and heads back to the first. Then it repeats, going back and forth between the two bikers. By the time they reach each other, how far will the fly have travelled?



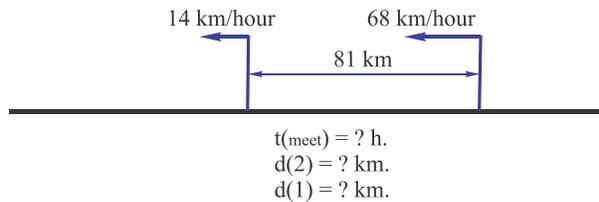
2. Andrew is walking along a narrow bridge. When Andrew passes exactly $\frac{1}{3}$ of the length of the bridge he notices a cyclist on the road to the bridge heading after him. If Andrew will start walking toward the cyclist, they will meet at the beginning of the bridge. If he will continue toward the end of the bridge, the cyclist will catch up with him at the end of the bridge. How many times is the speed of the cyclist higher than the speed of the walker?
3. Come up with the word problems corresponding to the pictures below and solve them:



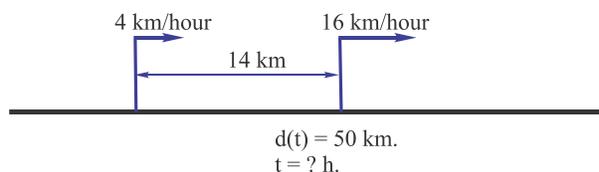
a.



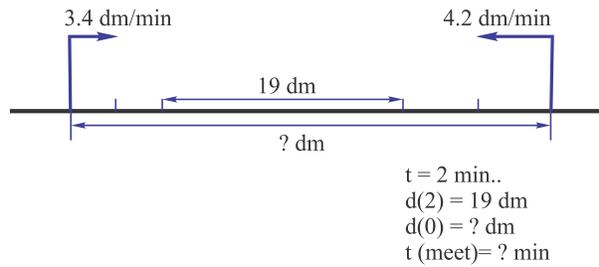
b.



c.



d.



4. What can move with the following speed:

$$1.5 \frac{\text{km}}{\text{min}}, \quad 0.5 \frac{\text{km}}{\text{s}}, \quad 5 \frac{\text{m}}{\text{s}}, \quad 70 \frac{\text{m}}{\text{min}}$$

5. Evaluate:

a. $0.36 + \frac{1}{2}$; b. $5.8 - \frac{3}{4}$; c. $\frac{2}{5} : 0.001$; d. $7.2 \cdot \frac{1}{100}$;

e. $\frac{2}{3} + 0.6$; f. $1\frac{1}{6} - 0.5$; g. $0.3 \cdot \frac{5}{9}$; h. $\frac{8}{11} : 0.4$

i. $3\frac{4}{5} - 1.8$; j. $2.2 : \frac{11}{15}$; k. $4.2 : 3\frac{1}{2}$; l. $5.384 - 4\frac{3}{20}$

6. Peter visited his grandma. Grandma's house is 5 miles away from the Peter's house on the same very straight street. He walked to the grandma house with the constant speed of 3 mph, spent 2 hours at the grandma's house and went back home with the speed of 2 mph. On a graph paper draw how distance between Peter and his house changing with time, and how the distance Peter walked is changing with time.