

Math 4a. Homework 19.

Problems marked with * are more difficult.

1. Represent number 10 as a sum of two natural numbers, the sum of the squares of these numbers is equal to 58.
2. When natural number N is divided by 8, the remainder is 5. What will be the remainder of $(2 \cdot N)$ upon division by 8?



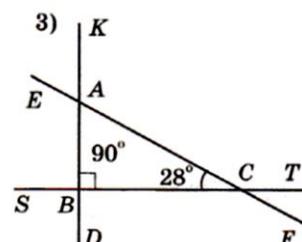
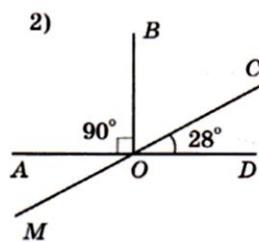
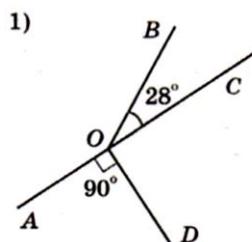
3. A snapping turtle and a painted turtle start to go down to the lake at the same time. The snapping turtle is 80 meters from the lake, and he can crawl 125 cm every 5 minutes. The painted turtle is 16 meters further away from the lake, but he can crawl 12 dm every 4 minutes. Which turtle reaches the lake first if they keep on going by their own speeds and never rest?



4. There are 10 pairs of socks in a box, all are of different colors. How many socks do you need to take out without seeing their color to be sure that you have at least one pair of socks of the same color?



5. Julia have to write a 32-pages paper in 3 days. On the first day she wrote $\frac{3}{8}$ of the whole paper, one the second day she wrote $\frac{1}{4}$ of the paper. How many pages does she need to write on the third day?
6. Can you find the missing angular measures on the picture below without measuring angles? (hint: three angles of any triangles add up to a straight angle, vertical angles are equal)



7. Find:

- a. 1% from 100
- b. 7% from 200
- c. 100% from 49
- d. 1% from 300
- e. 20% from 15

- f. 120% from 250
- g. 5% from 50
- h. 25% from 48
- i. 200% from 30

8. Solve the following equations:

$$0.12 + x = 0.4$$

$$x - 5.4 = \frac{1}{6}$$

$$3 - x = 0.003$$

$$x + \frac{1}{8} = 1.375$$