

Word problems

№1. Petro bought 24 notebooks, of which the number of lined notebooks was 6 more than the number of squared (graph) notebooks. How many notebooks of each type did Petro buy?

№2. (*Ukraine 2021*) Olena bought a train ticket via a website (see document fragment) costing 240 UAH. The cost includes: the ticket — 34.50 UAH, the berth — 147 UAH, and other expenses — 58.50 UAH. Ten hours before the train departure, Olena decided to return the ticket. According to the rules, in this case, she will be refunded only the cost of the ticket and half of the berth cost. In addition, a service fee of 18 UAH will be charged for returning the ticket.

МПС	ЦЕЙ ПОСАДОЧНИЙ ДОКУМЕНТ Є ПІДСТАВОЮ ДЛЯ ПРОЇЗДУ		
Прізвище, Ім'я		Абвгдейко Олена	Поїзд
Відправлення	2200001	КИЇВ-ПАСАЖИРСЬКИЙ	Вагон
Призначення	2200200	ВІННИЦЯ	Місце
Дата/час відпр.		12.12.2020 06:50	Сервіс
Дата/час приб.		12.12.2020 09:09	
ВАРТ = 240,00 ГРН			

1. What amount of money P (in UAH) will Olena receive when returning this ticket?
2. What percentage of the ticket's total cost does this amount P represent?

№3. The three highest mountain peaks of Ukraine — Hoverla, Brebeneskul, and Petros — are located in the highest mountain range, Chornohora, in the Carpathians. The sum of their heights is 6113 m, with Hoverla being 29 m higher than Brebeneskul and 41 m higher than Petros. Find the height of each peak.

№4. Two storages contained the same amount of coal. When 680 tons were removed from the first storage and 200 tons from the second, the first storage had 5 times less coal than the second. How many tons of coal were in each storage initially?

№5. Two cars, a passenger car and a truck, depart from two cities 655 km apart, traveling towards each other. The passenger car moves at 80 km/h, the truck at 50 km/h. How long did each car travel until they met if the passenger car departed 4 hours later than the truck?

№6. A reservoir is filled by two pipes in 5 hours, and the first pipe alone fills it in 6 hours. How long will it take to fill the reservoir if only the second pipe is opened?

№7. A motorboat traveled 4 hours downstream and 3 hours upstream. The distance traveled downstream was 48 km more than the distance traveled upstream. Find the speed of the motorboat in still water if the river current speed is 2.5 km/h.

№8. In two alloys, the masses of copper and zinc are in the ratios 5 : 2 and 3 : 4, respectively. How many kilograms of the first alloy and how many of the second alloy should be taken to obtain 28 kg of a new alloy with equal amounts of copper and zinc?

№9. The cost of delivering one truckload of sand to a construction site is 1000 UAH, and one truckload of gravel costs 1600 UAH. It is planned to make 50 trips in one day, and the total transportation costs must not exceed 59,000 UAH. How many truckloads of gravel can be delivered in one day?