



Fraction word problems (unit fraction)

Grade 5 Word Problems Worksheet

1. The time to manufacture a pair of headphones on each assembly line is $\frac{1}{3}$ hour. If there are 24 assembly lines and they operate 8 hours a day, how many pairs of headphones can be manufactured in a day?
2. $\frac{1}{8}$ gram of copper and $\frac{1}{3}$ gram of silicone is used to manufacture 30 headphones. How much silicone is used in each pair of headphones?
3. To make sure the machines in the factory run smoothly, the mechanics need to add $\frac{1}{5}$ liter of oil to the machine every Monday. One Monday, a mechanic can only find 12 liters of oil in the storage. Is there enough oil for 65 machines?



4. A team of 6 workers at the factory is responsible to check the quality of the headphones manufactured. They have a $\frac{1}{2}$ hour to do quick tests on 15 randomly selected headphones. How many minutes do the workers have to test each pair of headphones?
5. Usually, $\frac{1}{1000}$ of the headphones cannot pass the tests. If they found 5 headphones failing, how many headphones did the workers test?
6. After the headphones are tested, each pair of headphones are packed in a small box. Each small box is $\frac{1}{4}$ cubic foot. How many boxes of headphones can fit into a truck with a cargo compartment of 60 cubic feet?



Answers

1. $8 \div \frac{1}{3} \times 24 = 576$
576 pairs of headphones can be manufactured in a day.
2. $\frac{1}{3} \div 30 = \frac{1}{90}$
 $\frac{1}{90}$ gram of silicone is used in each pair of headphones.
3. $12 \div \frac{1}{5} = 60$
12 liters of oil is enough oil for 60 machines.
There is not enough oil for 65 machines.
4. $\frac{1}{2} \div 15 \times 60 = 2$
The workers have 2 minutes to do quick tests on each pair of headphones.
5. $5 \div \frac{1}{1000} = 5000$
The workers tested 5000 headphones.
6. $60 \div \frac{1}{4} = 240$
240 boxes of headphones can fit in the truck.