

Fractions Word Problems – Grade 8

Solve these on a separate sheet of paper.

The following word problems may require you to add, subtract, multiply or divide fractions.

Read each problem carefully to choose the correct operation. Some of these are tricky! Be sure to show your work and state your answer in a sentence!

1. The girl's hockey team won 6 games, lost 3 games, and tied 2 games. What fraction of games did they win?
2. In a full set of permanent teeth, $\frac{1}{4}$ of the teeth are incisors, $\frac{1}{4}$ are premolars, and $\frac{3}{8}$ are molars. What fraction of all the teeth are incisors, premolars and molars?
3. Chad made a snack by combining $\frac{1}{3}$ of a bowl of granola with $\frac{1}{4}$ of a bowl of chopped banana and $\frac{1}{2}$ of a bowl of yoghurt. Did one bowl hold all of the ingredients at one time? Explain.
4. In the first two hockey games of the year, Rodayo played $1\frac{1}{2}$ periods and $1\frac{3}{4}$ periods. How many periods in all did he play?
5. Neptune completes $1\frac{1}{2}$ turns about its axis each day. How many turns does it complete in 1 week?
6. Shane has a piece of rope that is $7\frac{4}{5}$ units long. If he cuts it into pieces that are each $\frac{3}{5}$ of a unit long, how many pieces does he have?
7. About $\frac{3}{4}$ of the students on the track team are girls. About $\frac{3}{4}$ of these girls are in grade 8. What fraction of the students on the track team are grade 8 girls?
8. Mara spent $\frac{3}{5}$ of her vacation in British Columbia. While in that province, she spent $\frac{1}{2}$ of her time in Vancouver. What fraction of her vacation did Michaela spend in Vancouver? If her vacation lasted 20 days, how many days did she spend in Vancouver?
9. Nick mowed about $\frac{3}{5}$ of the school lawn yesterday. He mowed another $\frac{1}{4}$ of the lawn this morning. How much is left to mow?
10. Jackie used to be on the phone $3\frac{1}{2}$ times as much as her brother. Her parents threatened to take away the phone, so she cut down to $\frac{2}{5}$ of the time she used to be on the phone. How many times as much as her brother is Jackie now on the phone?

Word problem answers (in brief)

1. You need to add 6, 3 and 2 to find that the total number of games is 11. The total won is $\frac{6}{11}$.
2. You need to add the fractions of each tooth type. The answer is $\frac{7}{8}$.
3. First you need to add the fractions of each ingredient. The total is $\frac{13}{12}$. Because this is an improper fraction we know that the ingredients fill more than one bowl.
4. You need to add the fractions. The total is $\frac{13}{4}$ or $3\frac{1}{4}$ periods of play.
5. This is multiplication: $1\frac{1}{2}$ turns each day \times 7 days. The answer is $\frac{21}{2}$ or $10\frac{1}{2}$.
6. This is division. You are dividing the total length of rope ($7\frac{4}{5}$ units) by the length of a piece ($\frac{3}{5}$ units) to find how many pieces you can cut. The answer is 13 pieces.
7. You need to find what $\frac{3}{4}$ of $\frac{3}{4}$ is. This is multiplication. The answer is $\frac{9}{16}$. So 9 of the grade 8's are on the team.
8. First you need to find what $\frac{1}{2}$ of $\frac{3}{5}$ is. Remember that "of" means "x" so this is a multiplication question and the answer is $\frac{3}{10}$ of her vacation in Vancouver.

Next you need to find $\frac{3}{10}$ of 20. Again this is multiplication and the answer is $\frac{60}{10}$ or 6. She spends 6 days in Vancouver.
9. This is addition and subtraction. Add $\frac{3}{5}$ and $\frac{1}{4}$ to get the total mowed. The answer is $\frac{17}{20}$ mowed.

Now you need to subtract the amount mowed from the total amount, to get the amount left to mow. The whole would be "1" or $\frac{20}{20}$. The answer is that there is $\frac{3}{20}$ left to mow.
10. This is multiplication. Find $\frac{2}{5}$ of $3\frac{1}{2}$ times. The answer is $\frac{14}{10}$ or $1\frac{1}{5}$. Jackie is on the phone $1\frac{1}{5}$ times as much as her brother.