Year 7 Worksheet 2: Fractions

Question 1: Understanding and working with fractions.

1	Are 2/4 and 3/6 equivalent fractions? If not, simplify them.
2	Find an equivalent fraction to 5/8 with a denominator of 16.
3	Simplify 6/12 to its lowest terms.
4	If you have a pizza cut into 10 equal slices, what fraction represents 5 of those slices?
5	Express 2/3 as a fraction with a denominator of 9.

6	If you have 3/4 of a pie and want to share it equally among 6 friends, what fraction of the pie does each friend get?
7	Simplify 9/12 to its lowest terms.
8	Are 4/5 and 8/10 equivalent fractions? If not, simplify them.
9	If you have 2/3 of a cake left and you want to share it equally with 5 friends, what fraction of the cake does each friend get?
10	Express 3/10 as a fraction with a denominator of 20.

Question 2: Answer the following. Simplify it as much as you can.

1	Add 3/4 and 1/2.
2	Subtract 5/8 from 1.
3	Multiply 2/3 by 4/5.
4	Divide 3/4 by 1/2.
5	If you have 2/3 of a cake, and you want to share it equally among 4 friends, how much will each friend get?

6	If you have a recipe that serves 6 people, but you want to make it for 3 people, how much of each ingredient should you use?
7	A swimming pool is 1/3 full. If it contains 12,000 liters of water, how many liters of water are in the pool?
8	If you spend 3/5 of an hour (or 36 minutes) doing homework, and then spend 1/4 of an hour (or 15 minutes) on a break, how much time have you spent in total?
9	If a car travels at an average speed of 3/4 of 60 kilometers per hour, how far does it travel in 2 hours?
10	If you have 1/8 of a pizza left, and you eat 1/4 of what's left, how much pizza have you eaten?

Question 3: Equivalent fractions and simplifying fractions.

1	Sarah ate 3/4 of a pizza, and John ate 2/8 of the same pizza. Who ate more, and by how much?
2	If you have a pizza divided into 12 equal slices and you eat 5/12 of it, how many slices did you eat?
3	If you have a pizza divided into 8 slices, and you eat 3/8 of it, what fraction of the pizza is left?
4	If you have 3/5 of a cake left and you eat 1/10 of it, how much cake is left?
5	Mary has 2/3 of her allowance left, and she wants to save 3/4 of it. How much will she save?

6	If you have a bag of marbles with 15 red marbles and 5 blue marbles, what fraction represents the red marbles? Simplify it.
7	A rectangular garden is 6/7 of a meter long and 3/4 of a meter wide. What is the area of the garden in square meters?
8	If a soccer team wins 2/5 of their games and loses the rest, and they've played 20 games, how many games did they lose?
9	A recipe calls for 1/3 cup of sugar, but you want to make 1/2 of the recipe. How much sugar do you need?
10	Lisa baked 18 cookies, and 1/6 of them are chocolate chip cookies. How many cookies did she bake that are not chocolate chips?

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Answer Key

Question 1: Answer the following.

1	Are 2/4 and 3/6 equivalent fractions? If not, simplify them. Answer: Yes, they are equivalent fractions. Both are equal to 1/2.
2	Find an equivalent fraction to 5/8 with a denominator of 16. Answer: 5/8 is equivalent to 10/16.
3	Simplify 6/12 to its lowest terms. Answer: 6/12 simplifies to 1/2.
4	If you have a pizza cut into 10 equal slices, what fraction represents 5 of those slices? Answer: 5/10 or 1/2 represents 5 slices.
5	Express 2/3 as a fraction with a denominator of 9. Answer: 2/3 is equivalent to 6/9.
6	If you have 3/4 of a pie and want to share it equally among 6 friends, what fraction of the pie does each friend get? Answer: Each friend gets 1/8 of the pie.
7	Simplify 9/12 to its lowest terms. Answer: 9/12 simplifies to 3/4.
8	Are 4/5 and 8/10 equivalent fractions? If not, simplify them. Answer: Yes, they are equivalent fractions. Both are equal to 4/5.
9	If you have 2/3 of a cake left and you want to share it equally with 5 friends, what fraction of the cake does each friend get? Answer: Each friend gets 2/15 of the cake.
10	Express 3/10 as a fraction with a denominator of 20. Answer: 3/10 is equivalent to 6/20.

Question 2: Answer the following. Simplify it as much as you can.

1	Add 3/4 and 1/2. Answer: The sum is 5/4, which simplifies to 1 ¼ .
2	Subtract 5/8 from 1. Answer: The difference is 3/8.
3	Multiply 2/3 by 4/5. Answer: The product is 8/15.
4	Divide 3/4 by 1/2. Answer: The quotient is 3/2, which simplifies to 1 and 1/2.
5	If you have 2/3 of a cake, and you want to share it equally among 4 friends, how much will each friend get? Answer: Each friend will get 1/6 of the cake.
6	If you have a recipe that serves 6 people, but you want to make it for 3 people, how much of each ingredient should you use? Answer: Use 1/2 of each ingredient.
7	A swimming pool is 1/3 full. If it contains 12,000 liters of water, how many liters of water are in the pool? Answer: There are 4,000 liters of water in the pool.
8	If you spend 3/5 of an hour (or 36 minutes) doing homework, and then spend 1/4 of an hour (or 15 minutes) on a break, how much time have you spent in total? Answer: You've spent 51 minutes in total.
9	If a car travels at an average speed of 3/4 of 60 kilometers per hour, how far does it travel in 2 hours? Answer: The car travels 90 kilometers in 2 hours.
10	If you have 1/8 of a pizza left, and you eat 1/4 of what's left, how much pizza have you eaten? Answer: You have eaten 1/32 of the pizza.

Question 3: Answer the following.

1	Sarah ate 3/4 of a pizza, and John ate 2/8 of the same pizza. Who ate more, and by how much? Answer: Sarah ate more by 1/2 of the pizza.
2	If you have a pizza divided into 12 equal slices and you eat 5/12 of it, how many slices did you eat? Answer: You ate 5 slices.
3	If you have a pizza divided into 8 slices, and you eat 3/8 of it, what fraction of the pizza is left? Answer: 5/8 of the pizza is left.
4	If you have 3/5 of a cake left and you eat 1/10 of it, how much cake is left? Answer: There is 3/50 or 0.06 of the cake left.
5	Mary has 2/3 of her allowance left, and she wants to save 3/4 of it. How much will she save? Answer: She will save 1/2 of her allowance.
6	If you have a bag of marbles with 15 red marbles and 5 blue marbles, what fraction represents the red marbles? Simplify it. Answer: The fraction representing red marbles is 15/20, which simplifies to 3/4.
7	A rectangular garden is 6/7 of a meter long and 3/4 of a meter wide. What is the area of the garden in square meters? Answer: The area is 9/14 = 0.6429 square meters.
8	If a soccer team wins 2/5 of their games and loses the rest, and they've played 20 games, how many games did they lose? Answer: They won 12 games.
9	A recipe calls for 1/3 cup of sugar, but you want to make 1/2 of the recipe. How much sugar do you need? Answer: You need 1/6 cup of sugar.
10	Lisa baked 18 cookies, and 1/6 of them are chocolate chip cookies. How many cookies did she bake that are not chocolate chips? Answer: Lisa baked 15 chocolate chip cookies.