

Adding Fractions with the Same Denominator

For each question:

- Write down the answer.
- Show any workings clearly.
- Give your answer in its simplest form.

1. $\frac{2}{8} + \frac{4}{8} =$

2. $\frac{3}{8} + \frac{2}{8} =$

3. $\frac{2}{9} + \frac{1}{9} =$

4. Explain why $\frac{3}{10} + \frac{4}{10}$ is not $\frac{7}{20}$.

5. Eric says that $\frac{5}{8} + \frac{2}{8}$ is $\frac{7}{8}$. Tina says that $\frac{5}{8} + \frac{2}{8}$ is $\frac{7}{16}$. Who is correct and why?

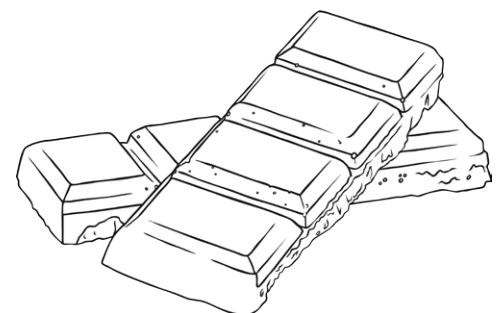
6. Is $\frac{2}{8} + \frac{4}{8}$ the same as $\frac{3}{4}$?
Explain why or why not.

7. Liam wants to make a drink. $\frac{2}{7}$ of the drink is water, $\frac{3}{7}$ of the drink is squash and the rest of the drink is lemonade. What fraction of the drink is lemonade?

8. Pat and Charlotte want to share their DVDs. Together, they have 20 DVDs. They want to keep 8 DVDs each. What fraction of the DVDs could they give to the charity shop?

9. Tom and Michael cooked a pizza. They divided their pizza into 10 slices. Tom ate 2 slices and Michael ate 4 slices. What fraction of the pizza was not eaten?

10. Olivia bought a pack of chocolate bars. In the pack, there were 12 chocolate bars. Olivia ate 3 and gave 4 to her friends. What fraction of the pack was left over?



Adding Fractions with the Same Denominator **Answers**

1. $\frac{6}{8} = \frac{3}{4}$
2. $\frac{5}{8}$
3. $\frac{3}{9} = \frac{1}{3}$
4. You do not add the denominators together when you are adding fractions. The answer would be $\frac{7}{10}$.
5. Eric is correct because he hasn't added the denominators. Tina is incorrect because she has added the numerators and denominators together.
6. Yes. $\frac{2}{8} + \frac{4}{8}$ is $\frac{6}{8}$. The highest common factor of 6 and 8 is 2. If we simplify the numerator and denominator by a factor of 2 then our answer becomes $\frac{3}{4}$.
7. $\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$
 $\frac{2}{7}$ lemonade is needed.
8. $\frac{8}{20} + \frac{8}{20} = \frac{16}{20}$.
They are able to give $\frac{4}{20}$ or $\frac{1}{5}$ of their DVDs to the charity shop.
9. $\frac{2}{10} + \frac{4}{10} = \frac{6}{10}$.
 $\frac{4}{10}$ or $\frac{2}{5}$ of the pizza was not eaten.
10. $\frac{3}{12} + \frac{4}{12} = \frac{7}{12}$.
 $\frac{5}{12}$ of the pack was left over.