

Adding & subtracting fractions



Add or subtract fractions with the same or different denominators, and simplify where you can.

Name _____

Date _____

Same denominator first

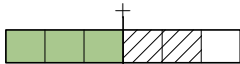
To add or subtract fractions with the SAME denominator, add or subtract the numerators and keep the denominator unchanged. If the denominators are DIFFERENT, rewrite both fractions with a common denominator first, then add or subtract the numerators.

Worked example Find $\frac{1}{4} + \frac{2}{4}$ using the bar.



1 quarter + 2 quarters = 3 quarters.
 $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$.

1. Use the bar to find $\frac{3}{6} + \frac{2}{6}$.



Solution

$3 + 2 = 5$ sixths.
 $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$.

2. Use the bar to find $\frac{7}{8} - \frac{3}{8}$.



Solution

$7 - 3 = 4$ eighths.
 $\frac{7}{8} - \frac{3}{8} = \frac{4}{8} = \frac{1}{2}$.

3. $\frac{1}{8} + \frac{3}{8}$.

Solution

$1 + 3 = 4$ eighths.
 $\frac{1}{8} + \frac{3}{8} = \frac{4}{8} = \frac{1}{2}$.

4. $\frac{5}{9} - \frac{2}{9}$.

Solution

$5 - 2 = 3$ ninths.
 $\frac{5}{9} - \frac{2}{9} = \frac{3}{9} = \frac{1}{3}$.

5. $\frac{2}{7} + \frac{4}{7}$.

Solution

$2 + 4 = 6$ sevenths.
 $\frac{2}{7} + \frac{4}{7} = \frac{6}{7}$.

6. $\frac{6}{11} - \frac{1}{11}$.

Solution

$6 - 1 = 5$ elevenths.
 $\frac{6}{11} - \frac{1}{11} = \frac{5}{11}$.

7. $\frac{3}{10} + \frac{5}{10}$.

Solution

$3 + 5 = 8$ tenths.
 $\frac{3}{10} + \frac{5}{10} = \frac{8}{10} = \frac{4}{5}$.

8. $\frac{9}{12} - \frac{4}{12}$.

Solution

$9 - 4 = 5$ twelfths.
 $\frac{9}{12} - \frac{4}{12} = \frac{5}{12}$.

9. $\frac{1}{2} + \frac{1}{4}$.

Solution

Common denominator 4:
 $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$.

Adding & subtracting fractions (continued)



Add or subtract fractions with the same or different denominators, and simplify where you can.

Name _____

Date _____

10. $\frac{3}{4} - \frac{1}{8}$.

Solution

Common denominator 8:

$$\frac{6}{8} - \frac{1}{8} = \frac{5}{8}.$$

11. $\frac{2}{3} + \frac{1}{6}$.

Solution

Common denominator 6:

$$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}.$$

12. $\frac{5}{6} - \frac{1}{3}$.

Solution

Common denominator 6:

$$\frac{5}{6} - \frac{2}{6} = \frac{3}{6} = \frac{1}{2}.$$

13. $\frac{3}{5} + \frac{1}{10}$.

Solution

Common denominator 10:

$$\frac{6}{10} + \frac{1}{10} = \frac{7}{10}.$$

14. $\frac{7}{8} - \frac{1}{4}$.

Solution

Common denominator 8:

$$\frac{7}{8} - \frac{2}{8} = \frac{5}{8}.$$

15. Is $\frac{2}{3} + \frac{1}{6} = \frac{3}{9}$ correct? Explain.

Solution

No: $\frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6} = \frac{5}{6}$, not $\frac{3}{9}$.

16. Fill in the blank: $\frac{3}{4} + \frac{\square}{8} = 1$.

Solution

$\frac{3}{4} = \frac{6}{8}$, and $\frac{6}{8} + \frac{2}{8} = 1$, so $\square = 2$.

17. Mia walked $\frac{3}{8}$ km and then $\frac{5}{8}$ km. How far altogether?

Solution

$$\frac{3}{8} + \frac{5}{8} = \frac{8}{8} = 1 \text{ km.}$$

18. $1\frac{1}{4} + \frac{2}{3}$.

Solution

Common denominator 12:

$$1\frac{3}{12} + \frac{8}{12} = 1\frac{11}{12}.$$