

Adding & Subtracting *Fractions*

Answer key

5.NF.A.1

5.NF.A.2

13 problems

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

Answer $\frac{3}{4}$

Rewrite with denominator 4: $\frac{1}{2} = \frac{2}{4}$. Then $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$.

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

Answer $\frac{1}{2}$

Rewrite with denominator 6: $\frac{2}{3} = \frac{4}{6}$. Then $\frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$.

3. $\frac{1}{3} + \frac{2}{5}$.

Answer $\frac{11}{15}$

Common denominator 15: $\frac{1}{3} = \frac{5}{15}$, $\frac{2}{5} = \frac{6}{15}$. Sum = $\frac{11}{15}$.

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

Answer $\frac{5}{12}$

Common denominator 12: $\frac{3}{4} = \frac{9}{12}$, $\frac{1}{3} = \frac{4}{12}$. Difference = $\frac{5}{12}$.

5. $\frac{5}{6} + \frac{3}{8}$.

Answer $\frac{29}{24}$, or $1\frac{5}{24}$

Common denominator 24: $\frac{5}{6} = \frac{20}{24}$, $\frac{3}{8} = \frac{9}{24}$. Sum = $\frac{29}{24} = 1\frac{5}{24}$.

6. $\frac{7}{10} - \frac{2}{5}$.

Answer $\frac{3}{10}$

Common denominator 10: $\frac{2}{5} = \frac{4}{10}$. Then $\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$.

7. $\frac{3}{4} + \frac{5}{6}$.

Answer $\frac{19}{12}$, or $1\frac{7}{12}$

Common denominator 12: $\frac{3}{4} = \frac{9}{12}$, $\frac{5}{6} = \frac{10}{12}$. Sum = $\frac{19}{12} = 1\frac{7}{12}$.

8. Which expression is equal to $\frac{1}{2} + \frac{1}{3}$?

Answer B) $\frac{3}{6} + \frac{2}{6}$

With denominator 6, $\frac{1}{2} = \frac{3}{6}$ and $\frac{1}{3} = \frac{2}{6}$, so the sum is $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$.

9. Evaluate: $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$.

Answer 1

Common denominator 6: $\frac{3}{6} + \frac{2}{6} + \frac{1}{6} = \frac{6}{6} = 1$.

10. Estimate whether $\frac{7}{8} + \frac{1}{12}$ is closer to 0, $\frac{1}{2}$, or 1. Then find the exact sum.

Answer Closer to 1; exact sum $\frac{23}{24}$

$\frac{7}{8}$ is near 1 and $\frac{1}{12}$ is near 0, so the sum is near 1. Common denominator 24: $\frac{21}{24} + \frac{2}{24} = \frac{23}{24}$.

11. Maya walked $\frac{3}{4}$ mile to the library and then $\frac{2}{5}$ mile to the park. How far did she walk in all?

Answer $\frac{23}{20}$ mile, or $1\frac{3}{20}$ mile

Common denominator 20: $\frac{3}{4} = \frac{15}{20}$, $\frac{2}{5} = \frac{8}{20}$. Total = $\frac{23}{20} = 1\frac{3}{20}$ mile.

12. A pitcher holds $\frac{7}{8}$ liter of juice. After Sam pours out $\frac{1}{3}$ liter, how much juice is left?

Answer $\frac{13}{24}$ liter

Common denominator 24: $\frac{7}{8} = \frac{21}{24}$, $\frac{1}{3} = \frac{8}{24}$. Left = $\frac{21}{24} - \frac{8}{24} = \frac{13}{24}$ liter.

13. A recipe needs $\frac{2}{3}$ cup of flour and $\frac{1}{4}$ cup of sugar. How many cups of dry ingredients is that altogether? Is it more or less than 1 cup?

Answer $\frac{11}{12}$ cup; less than 1 cup

Common denominator 12: $\frac{2}{3} = \frac{8}{12}$, $\frac{1}{4} = \frac{3}{12}$. Sum = $\frac{11}{12}$, which is less than $\frac{12}{12} = 1$.