

Name: L02Date: 10-14-20

Use benchmarks to estimate each sum.

Example

$$\begin{array}{r} \frac{1}{4} \\ \downarrow \\ 0 \end{array} + \begin{array}{r} \frac{2}{5} \\ \downarrow \\ \frac{1}{2} \end{array} = \frac{1}{2}$$

Common **benchmarks** for estimating fractions are 0 , $\frac{1}{2}$, and 1 .

41. $\begin{array}{r} \frac{3}{4} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{7}{8} \\ \downarrow \\ 1 \end{array} = 2$

42. $\begin{array}{r} \frac{11}{12} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{7}{12} \\ \downarrow \\ \frac{1}{2} \end{array} = 1\frac{1}{2}$

43. $\begin{array}{r} \frac{5}{9} \\ \downarrow \\ \frac{1}{2} \end{array} + \begin{array}{r} \frac{5}{12} \\ \downarrow \\ \frac{1}{2} \end{array} + \begin{array}{r} \frac{10}{11} \\ \downarrow \\ 1 \end{array} = 2$

44. $\frac{6}{9} + \frac{11}{12} = 1\frac{1}{2}$

$1 + 1 = 1\frac{1}{2}$

45. $\frac{3}{8} + \frac{5}{9} = \frac{1}{2}$

$0 + \frac{1}{2} = \frac{1}{2}$

46. $\frac{1}{2} + \frac{4}{5} + \frac{8}{9} = 3$

$1 + 1 + 1 = 3$

47. $\frac{5}{6} + \frac{6}{7} + \frac{7}{8}$

$1 + 1 + 1 = 3$

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Estimate each sum by rounding the fractions to 0, $\frac{1}{2}$, or 1. Then find the actual sum. Express each sum in simplest form.

9. $\overset{\frac{1}{2}}{\frac{2}{5}} + \overset{0}{\frac{3}{8}} = \frac{1}{2}$

$$\frac{2}{5} = \frac{1}{2}$$

$$\frac{3}{8} = 0$$

$$1 + 1 = 2$$

11. $\frac{7}{10} + \frac{3}{4} = 2$

$$\frac{3}{4} = 1$$

$$\frac{7}{10} = 1$$

13. $\overset{1+0}{\frac{7}{8}} + \frac{1}{6} = 1$

$$\frac{1}{6} = 0$$

$$\frac{7}{8} = 1$$

10. $\overset{0+0}{\frac{1}{3}} + \frac{1}{10} = 0$

$$\frac{1}{3} = 0$$

$$\frac{1}{10} = 0$$

12. $\overset{1+1}{\frac{4}{5}} + \frac{2}{3} = 2$

$$\frac{4}{5} = 1$$

$$\frac{2}{3} = 1$$

14. $\overset{1+1}{\frac{6}{7}} + \frac{3}{4} = 2$

$$\frac{6}{7} = 1$$

$$\frac{3}{4} = 1$$