

Name: LO2Date: 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.  $\frac{3}{4} + \frac{7}{8}$

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

42.  $\frac{11}{12} + \frac{7}{12}$

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

43.  $\frac{5}{9} + \frac{5}{12} + \frac{10}{11}$

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

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

$$\begin{array}{r} \frac{6}{9} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{11}{12} \\ \downarrow \\ 1 \end{array} = 1\frac{1}{2}$$

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

$$\begin{array}{r} \frac{3}{8} \\ \downarrow \\ 0 \end{array} + \begin{array}{r} \frac{5}{9} \\ \downarrow \\ \frac{1}{2} \end{array} = \frac{1}{2}$$

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

$$\begin{array}{r} \frac{1}{2} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{4}{5} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{8}{9} \\ \downarrow \\ 1 \end{array} = 3$$

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

$$\begin{array}{r} \frac{5}{6} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{6}{7} \\ \downarrow \\ 1 \end{array} + \begin{array}{r} \frac{7}{8} \\ \downarrow \\ 1 \end{array} = 3$$

Name: LOZ

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

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

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