

Renaming
Regrouping → fractions for subtracting

"Borrowing"

Shortcut #1

$$\begin{aligned}
 &5 + \frac{2}{5} = 5\frac{2}{5} \\
 &\swarrow \quad \searrow \\
 &(4+1) + \frac{2}{5} \\
 &4 + (1 + \frac{2}{5}) \\
 &\quad \searrow \\
 &4 + 1\frac{2}{5} \\
 &\quad \searrow \\
 &4 + \frac{7}{5} \\
 &\quad \searrow \\
 &\boxed{4\frac{7}{5} = 5\frac{2}{5}}
 \end{aligned}$$

$$\begin{aligned}
 &5\frac{2}{5} \\
 &\quad \swarrow \\
 &4 \quad \swarrow \\
 &\quad \searrow \\
 &\quad 5\frac{2}{5} \\
 &\quad \searrow \\
 &4 + 1\frac{2}{5} \\
 &\quad \searrow \\
 &4 + \frac{7}{5}
 \end{aligned}$$

$$\boxed{4\frac{7}{5} = 5\frac{2}{5}}$$

Shortcut #2

ex. 1

$$\begin{aligned}
 &5\frac{2}{5} \\
 &\quad \text{add}=7 \\
 &5\frac{2}{5} \\
 &- 1 \\
 &\hline
 &\boxed{4\frac{7}{5}}
 \end{aligned}$$

ex. 2

$$\begin{aligned}
 &7\frac{2}{3} \\
 &\quad \text{add}=5 \\
 &7\frac{2}{3} \\
 &- 1 \\
 &\hline
 &\boxed{6\frac{5}{3}}
 \end{aligned}$$

ex. 3

$$\begin{aligned}
 &12\frac{4}{5} \\
 &\quad \text{add}=9 \\
 &12\frac{4}{5} \\
 &- 1 \\
 &\hline
 &\boxed{11\frac{9}{5}}
 \end{aligned}$$

① Subtract a 1 from the whole #

② add the numerator + denominator - that is new numerator