

Convert $8\frac{1}{2}$ to fraction notation.

Rewriting the mixed number from its shorthand notation to its more literal

meaning gives us that: $8\frac{1}{2} = 8 + \frac{1}{2}$

since the LCD is "2,"
express the right-hand side as $= \frac{16}{2} + \frac{1}{2}$

add the numerators, and
we now have our answer $= \frac{17}{2}$

However, some may either
already know or recognize
a short-cut to the answer...

$$\begin{aligned} 8\frac{1}{2} &= \frac{2 \times 8 + 1}{2} \\ &= \frac{17}{2} \end{aligned}$$

In essence, then the numerator is found by taking the denominator of the fraction part of the mixed number times the whole number part and then adding the numerator from the (original) fraction part; once learned, this method is obviously quite a bit faster and thus is the preferred way of obtaining the answer (*i.e.*, converting a mixed number to an improper fraction)...