

Dividing By 9 Into A Mixed Number:

A. Dividing by 9 into a mixed number uses the [Divisibility Rules](#) for 9.

1. First, add all the digits together and divide by 9, keeping in mind the whole number and the remainder.
2. Write the remainder over 9, this is the fraction part of the answer. (Make sure the fraction is in simplest form.)
3. Add all the digits together again, except for the last one. If there was a whole number from step 1, add this too. Write the number down, carrying if need be.
4. Continue to add all the digits together, subtracting off one digit each time, until you are left with the first digit. Write these numbers down, carry if need be.
5. Write the last number down. (Remember to add any carried numbers.)

B. Here are some examples to help illustrate the above steps:

Ex [1] $1234 \div 9 = \underline{\hspace{2cm}}$ (mixed number).

- a. Add all the digits together and divide by 9: $1+2+3+4 = 10$. 10 divided by 9 is 1 with 1 remainder.
- b. Write $\frac{1}{9}$, this is the fraction of the answer.
- c. Add $1+2+3+1 = 7$. Write 7.
- d. Add $1+2 = 3$. Write 3.
- e. The last number is 1, so write 1.
- f. The answer is $137 \frac{1}{9}$.

Ex [2] $8346 \div 9 = \underline{\hspace{2cm}}$ (mixed number).

- a. Add all the digits together and divide by 9: $8+3+4+6 = 21$. 21 divided by 9 is 2 with 3 remainder.
- b. The fraction part is $\frac{3}{9}$, which reduces to $\frac{1}{3}$.
- c. Add $8+3+4+2 = 17$. Write 7, carry 1.
- d. Add $8+3+1 = 12$. Write 2, carry 1.
- e. $8+1 = 9$. Write 9.
- f. The answer is $927 \frac{1}{3}$.