

Subtracting Mixed Numbers with Regrouping

PROBLEM: $5\frac{1}{3} - 1\frac{2}{3} =$

- ❶ Can we subtract the fraction parts as they are? *No*

Why not? 2 is bigger than 1

❷ REGROUP

$$4\frac{4}{3} - 1\frac{2}{3} =$$

❸ REWRITE the problem

$$3\frac{2}{3}$$

❹ SUBTRACT

❷ REGROUPING

$$5\frac{1}{3} - 1\frac{2}{3} =$$

$$5\frac{1}{3} = 4 + 1 + \frac{1}{3}$$

$$5\frac{1}{3} = 4 + \frac{3}{3} + \frac{1}{3}$$

$$5\frac{1}{3} = 4\frac{4}{3}$$

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Multiplying Mixed Numbers

Change mixed numbers into improper fractions then multiply as before.

Ex. 1: $2\frac{1}{2} \times 3\frac{1}{3} = \frac{5}{2} \times \frac{10}{3} = \frac{25}{3} = 8\frac{1}{3}$

Change the mixed numbers to improper fractions by:

$$2\frac{1}{2} = \frac{2 \times 2 + 1}{2} = \frac{4 + 1}{2} = \frac{5}{2}$$

1) multiplying the bottom number by the whole number
2) add the top number
3) keep the bottom number.

Cancel top and bottom. Multiply. Improper fractions simplify by dividing.

Ex. 2: $4\frac{1}{4} \times 6 = \frac{17}{4} \times \frac{6}{1} = \frac{51}{2} = 25\frac{1}{2}$ Change the mixed number into an improper fraction. Change the whole number into an improper fraction. Cancel. Multiply. Simplify to get the quotient.