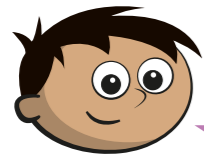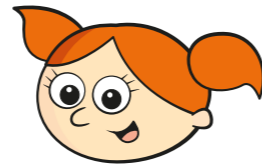# Subtract 2 mixed numbers

1 Amir and Alex are working out $3\frac{1}{2} - 2\frac{1}{4}$

Amir:
First subtract 2 from 3, then subtract $\frac{1}{4}$ from $\frac{1}{2}$
That leaves $1\frac{1}{4}$

Alex:
Convert to an improper fraction first, $\frac{7}{2} - \frac{9}{4}$, then
$\frac{14}{4} - \frac{9}{4} = \frac{5}{4} = 1\frac{1}{4}$

Whose method do you prefer?

2 Use your preferred method to complete the subtractions.

a) $4\frac{4}{5} - 2\frac{3}{10} = \boxed{2\frac{1}{2}}$

c) $16\frac{1}{2} - 5\frac{1}{4} = \boxed{11\frac{1}{4}}$

b) $3\frac{5}{8} - 1\frac{1}{4} = \boxed{2\frac{3}{8}}$

d) $10\frac{5}{6} - 5\frac{5}{12} = \boxed{5\frac{5}{12}}$
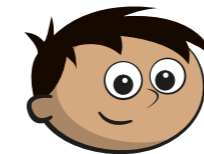
What do you notice about your answer to part d)?

3 Car A travels for $15\frac{1}{4}$ miles.

Car B travels for $21\frac{5}{12}$ miles.

How much further does Car B travel than Car A?

Car B travels $\boxed{6\frac{1}{6}}$ miles further than Car A.
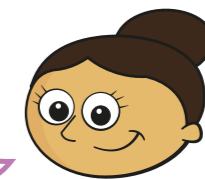
4 Amir and Dora are working out $4\frac{1}{5} - 1\frac{2}{5}$

Amir:
You can't use my method because you can't do $\frac{1}{5} - \frac{2}{5}$

a) Do you agree with Amir?

b)

Dora:
I know that $4\frac{1}{5} = 3\frac{6}{5}$

How does this help you to work out the subtraction?

$\frac{6}{5} - \frac{2}{5} = \frac{4}{5}$

c) Complete the calculation.

$4\frac{1}{5} - 1\frac{2}{5} = \boxed{2\frac{4}{5}}$
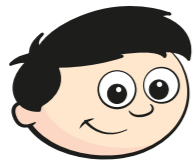
5 Complete the subtractions.

a) $4\frac{4}{5} - 2\frac{9}{10} =$ $\boxed{1\frac{9}{10}}$

c) $5\frac{2}{7} - 2\frac{11}{14} =$ $\boxed{2\frac{1}{2}}$

b) $3\frac{5}{8} - 1\frac{3}{4} =$ $\boxed{1\frac{7}{8}}$

d) $2\frac{1}{6} - 1\frac{7}{18} =$ $\boxed{\frac{7}{9}}$

6 Dexter is subtracting fractions.

$$5\frac{2}{3} - 3\frac{5}{6} = 2\frac{1}{6}$$

Explain the mistake that Dexter has made.

He has found the difference between the wholes $(5-3=2)$ and the difference between the fractions $\left(\frac{5}{6} - \frac{2}{3} = \frac{1}{6}\right)$ rather than doing $5\frac{2}{3} - 3\frac{5}{6} = 4\frac{5}{3} - 3\frac{5}{6} = 1\frac{5}{6}$

7 Here are some number cards.

$$\boxed{3\frac{1}{12}} \quad \boxed{4\frac{1}{2}} \quad \boxed{2\frac{5}{24}} \quad \boxed{4\frac{5}{6}}$$

a) Use two of the number cards to find the smallest difference.

$\boxed{4\frac{5}{6}} - \boxed{4\frac{1}{2}} = \boxed{\frac{1}{3}}$

b) Use two of the number cards to find the difference closest to 2

$\boxed{4\frac{5}{6}} - \boxed{3\frac{1}{12}} = \boxed{1\frac{3}{4}}$

8 Complete the magic square.

The total of each column is $5\frac{7}{20}$

The total of each row is $5\frac{7}{20}$

$1\frac{1}{2}$	$1\frac{3}{5}$	$2\frac{1}{4}$
$2\frac{3}{10}$	$1\frac{7}{20}$	$1\frac{7}{10}$
$1\frac{11}{20}$	$2\frac{2}{5}$	$1\frac{2}{5}$

9 A marathon is $26\frac{1}{5}$ miles.

Dexter has run $18\frac{1}{10}$ miles.

Eva has run $19\frac{3}{5}$ miles.

a) How much further has Eva run than Dexter?

$\boxed{1\frac{1}{2}}$ miles

b) How much further does Eva need to run to complete the marathon?

$\boxed{6\frac{3}{5}}$ miles