

Add and subtract fractions from integers expressing the answer as a single fraction

1 What is the same about the answers to the three calculations?

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

$$\frac{2}{5} + \frac{3}{5} = \frac{5}{5}$$

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

They are all equal to 1

2 Use a bar model to explain why $\frac{3}{5} + \frac{2}{5}$ is equal to 1



3 Use the bar models to work out the subtractions.

a) $1 - \frac{1}{3} = \frac{2}{3}$

b) $1 - \frac{2}{3} = \frac{1}{3}$

c) $1 - \frac{3}{7} = \frac{4}{7}$

4 Work out the subtractions.

a) $1 - \frac{1}{5} = \frac{4}{5}$

e) $1 - \frac{7}{10} = \frac{3}{10}$

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

f) $1 - \frac{9}{11} = \frac{2}{11}$

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

g) $\frac{9}{20} = 1 - \frac{11}{20}$

d) $1 - \frac{4}{5} = \frac{1}{5}$

h) $1 - \frac{7}{8} = \frac{1}{8}$

Compare answers with a partner.

Did you get the same answers? Discuss your methods.

5 Work out the additions.

a) $1 + \frac{2}{5} = 1\frac{2}{5}$

b) $15 + \frac{1}{3} = 15\frac{1}{3}$

$2 + \frac{2}{5} = 2\frac{2}{5}$

$15 + \frac{2}{3} = 15\frac{2}{3}$

$3 + \frac{2}{5} = 3\frac{2}{5}$

$15 + \frac{3}{3} = 16$

$7 + \frac{2}{5} = 7\frac{2}{5}$

c) Is the statement true or false? true

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

Talk about it with a partner.



6 Write an addition and a subtraction for the models.

a)  $1 + \frac{2}{3} \equiv 2 - \frac{1}{3}$

b)  $2 + \frac{1}{6} \equiv 3 - \frac{5}{6}$



c)  $11 + \frac{1}{4} \equiv 12 - \frac{3}{4}$

7 a) Dora and Rosie are trying to work out $9 - \frac{4}{11}$
What mistakes have they made?

Dora

$$9 - \frac{4}{11} = \frac{5}{11}$$

Dora has calculated

$\frac{9}{11} - \frac{4}{11}$



Rosie

$$9 - \frac{4}{11} = \frac{99}{11} - \frac{4}{11}$$

$$\text{So } 9 - \frac{4}{11} = \frac{95}{0}$$

Rosie has subtracted

the denominators.

b) How would you calculate $9 - \frac{4}{11}$

Compare your method with a partner's.



8 Work out the subtractions.

a) $3 - \frac{2}{5} = 2\frac{3}{5}$

c) $10 - \frac{3}{4} = 9\frac{1}{4}$

b) $8 - \frac{2}{3} = 7\frac{1}{3}$

d) $7 - \frac{10}{19} = 6\frac{9}{19}$

9 There are 6 episodes in a series.

Brett has watched $\frac{3}{4}$ of the first episode.

Exactly how many episodes does he need to watch to finish the series?

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

10 Kim orders 3 pizzas. Each pizza is sliced into 8 slices.

Kim has 3 slices and Tom has 4

Exactly how much pizza is left?

$$2\frac{1}{8}$$