

Add and subtract unit fractions with the same denominator


1 a) Circle the unit fractions.


$\frac{1}{2}$ $\frac{2}{3}$ $\frac{4}{1}$ $\frac{1}{10}$ $\frac{2}{8}$


b) Write three more unit fractions.


c) Describe, in your own words, what is meant by a unit fraction.

2 Use the bar models to help you with the calculations.

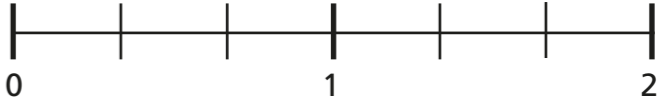
a) $\frac{1}{3} + \frac{1}{3} =$ 

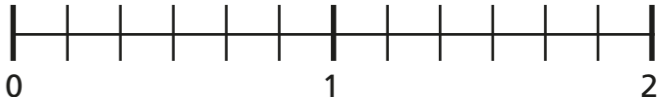
b) $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$ 

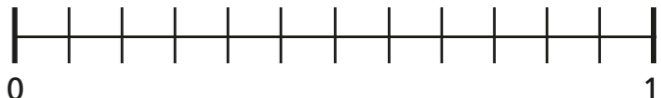
c) $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ 

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

3 Use the number lines to help you with the calculations.

a) $\frac{1}{3} + \frac{1}{3} =$ 

b) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} =$ 

c) $\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} =$ 

4 Write the fractions as sums of unit fractions.

a) $\frac{2}{3} =$ $+$

b) $\frac{2}{7} =$ $+$

c) $\frac{3}{7} =$ $+$ $+$

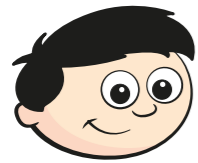
d) $\frac{3}{14} =$ _____

e) $\frac{4}{14} =$ _____

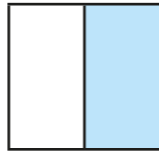
f) $\frac{7}{14} =$ _____



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$\frac{1}{2}$ cannot be written as the sum of unit fractions because it is already a unit fraction.



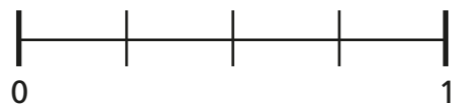
Is Dexter correct? _____

Explain your reasoning.

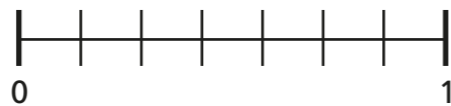
6

Fill in the missing denominators and show the calculations on the number lines.

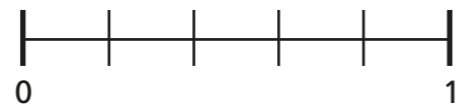
a) $\frac{1}{\square} + \frac{1}{\square} = \frac{2}{4}$



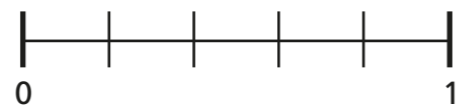
b) $\frac{1}{\square} - \frac{1}{\square} = \frac{0}{7}$



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



d) $\frac{5}{5} = \frac{1}{\square} + \frac{1}{\square} + \frac{1}{\square} + \frac{1}{\square} + \frac{1}{\square}$



What do you notice about part d)? Discuss with a partner.

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Complete the calculations by adding or subtracting unit fractions.

a) $\frac{3}{5} = \frac{1}{5} + \frac{1}{5}$ _____

b) $\frac{2}{5} = \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$ _____

c) $\frac{9}{9} = \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9} + \frac{1}{9}$ _____

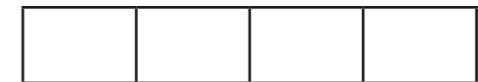
d) $\frac{0}{6} = \frac{1}{6} + \frac{1}{6}$ _____

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Complete the addition and the sentences to show how you can use unit fractions to make a whole.

Use the bar models to help.

a) $\frac{4}{4} = \frac{1}{4} +$ _____



You need to add $\frac{1}{4}$ times to make a whole.

b) $\frac{\square}{6} = \frac{1}{6} +$ _____



You need to add $\frac{1}{6}$ times to make a whole.

c) $\frac{\square}{20} = \frac{1}{\square} +$ _____



You need to add $\frac{1}{\square}$ times to make a whole.

Why is it not suitable to draw a bar model for part c)?

