

## Red



1) Is each statement always, sometimes or never true? Explain how you know.

a) When you subtract fractions, you subtract both the numerator and the denominator.

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b) You can't add or subtract fractions with different denominators.

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2)

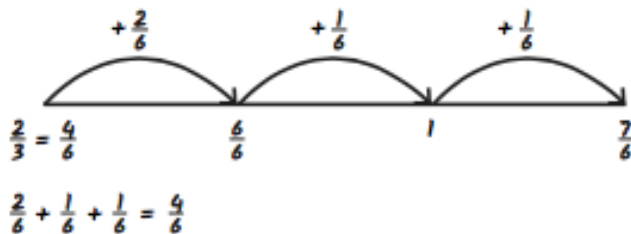


Convince me that  $\frac{3}{8} - \frac{1}{8} = \frac{1}{4}$ .

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3) Afzol used a number line to find the difference between  $\frac{7}{6}$  and  $\frac{2}{3}$ . Here is his working out:



What mistake did he make? Show your working here.

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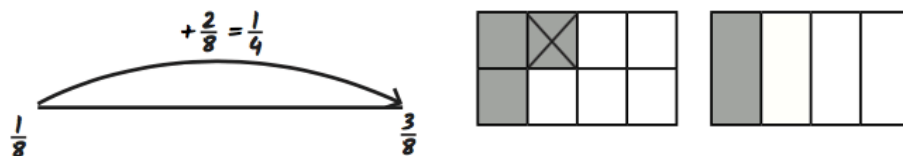
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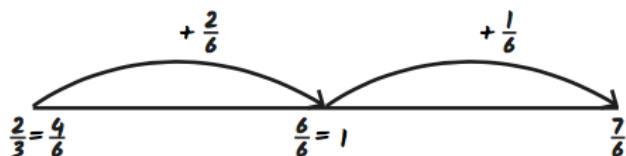
- 1) a) This is never true. You only subtract the numerators. If you subtracted the denominators, it would no longer describe how many parts are in one whole.
- b) This is always true. You must change one of the fractions into an equivalent fraction first. Both fractions need to have the same denominator so the parts that make up each whole are equal. This allows you to add them together or subtract them from each other.

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

Children may have used one of these methods to answer this question:



- 3)  $\frac{6}{6}$  is equivalent to 1 whole. They should be at the same point on the number line, so Afzol should only have added one jump of  $\frac{2}{6}$  and another jump of  $\frac{1}{6}$  to reach  $\frac{7}{6}$ .



$\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$  (This is equal to  $\frac{1}{2}$ .)