



DEEPENING UNDERSTANDING ANSWER SHEET

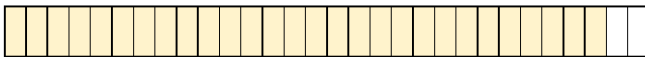
YEAR 6 PIM – ADD AND SUBTRACT FRACTIONS 2

Fluency 1

When we add and subtract fractions with denominators that are not multiples of each other, we find the lowest common multiple of both fractions' denominators.

Fluency 2

$$\frac{3}{5} + \frac{2}{6} = \frac{18}{30} + \frac{10}{30} = \frac{28}{30}$$



$$\frac{2}{3} - \frac{2}{8} = \frac{16}{24} - \frac{6}{24} = \frac{10}{24}$$



Fluency 3

$$\frac{1}{3} + \frac{2}{5} = \frac{5}{15} + \frac{6}{15} = \frac{11}{15}$$

$$\frac{3}{4} - \frac{6}{9} = \frac{27}{36} - \frac{24}{36} = \frac{3}{36} = \frac{1}{12}$$

Fluency 4

Millie has used $\frac{34}{35}$ of the rope.

There is $\frac{1}{35}$ left.



Reasoning 1

Pupil responses should show that Jane has not found the correct equivalent fraction for $\frac{3}{11}$.

Modelled DAB Reasoning Responses

D – Jane has not converted the fraction $\frac{3}{11}$ correctly.

A – She has multiplied the numerator by 2 instead of 3.

B – The correct calculation should be:

$$\frac{2}{3} - \frac{3}{11} = \frac{22}{33} - \frac{9}{33} = \frac{21}{33}$$

Reasoning 2

Pupil responses should show that the bar model does not show the calculation.

Modelled DAB Reasoning Response

D – The bar model does not show the calculation.

A – The bar model shows the calculation:

$$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

B – The fractions have been added. The correct answer should be: $\frac{1}{12}$

Reasoning 3

Pupil responses should show that Asha is correct.

Modelled DAB Reasoning Response

D – Asha is correct.

A – You can multiply the denominators together to find a common multiple.

B – If two numbers are not multiples of each other, you can multiply them together to find a common multiple. For example:

$$\frac{2}{3} - \frac{3}{11} = \frac{22}{33} - \frac{9}{33} = \frac{21}{33}$$



Reasoning 4

Modelled DAB Reasoning Response

D – The correct calculation is: $\frac{3}{15} + \frac{10}{15} = \frac{13}{15}$

A – The lowest common multiple for 3 and 5 is 15.

B – $\frac{1}{5} + \frac{2}{3} = \frac{3}{15} + \frac{10}{15} = \frac{13}{15}$

Download our 'DAB' posters to support reasoning in your classroom:

<https://www.deepeningunderstanding.co.uk/product/dab-reasoning-posters/>

Problem Solving 1

Pupils should work out that the fractions need to be converted into a common denominator of 63 so ...

Day 1 = 14/63 Day 2 = 9/63 Day 3 = 7/63 which equal 30/63

Therefore Day 4 could = equal 18/63 or 2/7 and Day 5 could = 15/63 or 5/21

Other possibilities include:

Day 4 = 1/7 or 9/63 and Day 5 = 24/63 or 8/21

Day 4 = 3/7 or 27/63 and Day 5 = 6/63 or 2/21

Problem Solving 2

24 full weeks

