

SMART EXAM RESOURCES
CAMBRIDGE LOWER SECONDARY MATHS
STAGE 8
TOPIC: MIXED NUMBERS
SET-1

1 Work out.

$$4 \times 1\frac{7}{12}$$

Give your answer as a mixed number in its simplest form.

..... [2]

MARK SCHEME

$6\frac{1}{3}$ correct answer only	2	Award 1 mark for $\frac{76}{12}$ or $\frac{19}{3}$ or equivalent.	Or equivalent, e.g. $6\frac{4}{12}$ or $6.\dot{3}$ for 1 mark.
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2 Work out.

$$5\frac{7}{12} - 3\frac{3}{4}$$

Give your answer as a mixed number in its simplest form.

..... [3]

Mark Scheme:

$1\frac{5}{6}$ correct answer only	<p>3 Award 2 marks for an equivalent fraction, not a mixed number or in simplest form, e.g. $\frac{11}{6}$, $\frac{22}{12}$, $1\frac{10}{12}$</p> <p>or</p> <p>Award 1 mark for $[5]\frac{7}{12} - [3]\frac{9}{12}$</p> <p>or $4\frac{19}{12} - 3\frac{9}{12}$ or $\frac{67}{12} - \frac{45}{12}$</p>	<p>For 1 mark, accept equivalent fractions with a common denominator, e.g. $[5]\frac{28}{48} - [3]\frac{36}{48}$</p> <p>For 1 mark, accept other equivalent methods, e.g. $2\frac{7}{12} - \frac{2}{12}$, $2 - \frac{2}{12}$</p>
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- 3 Jamila and Yuri both correctly work out the answer to $4\frac{3}{8} + 2\frac{3}{5}$ without a calculator. Here is their working.

Jamila's working

$$\begin{aligned} &4\frac{3}{8} + 2\frac{3}{5} \\ &= \frac{35}{8} + \frac{13}{5} \\ &= \frac{175}{40} + \frac{104}{40} \\ &= \frac{279}{40} \\ &= 6\frac{39}{40} \end{aligned}$$

Yuri's working

$$\begin{aligned} &4\frac{3}{8} + 2\frac{3}{5} \\ &= 4 + 2 + \frac{3}{8} + \frac{3}{5} \\ &= 6 + \frac{15}{40} + \frac{24}{40} \\ &= 6\frac{39}{40} \end{aligned}$$

Yuri's method has fewer steps than Jamila's method for this calculation.

Give **another** advantage of using Yuri's method rather than Jamila's method.

[1]

MARK SCHEME

6	<p>Any correct reason to do with ease / accuracy, e.g.</p> <ul style="list-style-type: none"> • The whole numbers have been kept separate (so the calculations are easier to do). • The fractions are easier/smaller to work with (so less chance of an arithmetic error). 	1		
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4 Work out.

$$8\frac{4}{7} - 3\frac{2}{7}$$

Give your answer as a mixed number in its simplest form.

..... [2]

MARK SCHEME

$5\frac{2}{7}$ correct answer only	2	<p>Award 1 mark for $\frac{37}{7}$ or correct mixed number not in simplest form or correct starting point, e.g.</p> <p>$5\frac{4}{7} - \frac{2}{7}$ or $8\frac{2}{7} - 3$</p>	<p>Accept less efficient methods, e.g. $\frac{60}{7} - \frac{23}{7}$</p>
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