

SMART EXAM RESOURCES
0580 IGCSE MATH EXTENDED

TOPIC: NUMBERS

SUB-TOPIC: SUMS INVOLVING MIXED NUMBER AND FRACTIONS

SET-1-QP-MS

- 01** Without using a calculator, work out $\frac{6}{7} \div 1\frac{2}{3}$.

Write down all the steps in your working.

Answer [3]

MARK SCHEME:

	with 2 correct steps seen $\frac{18k}{35k}$	3	B1 for $\frac{5k}{3k}$ and M1 for $\frac{6}{7} \times \text{their } \frac{3}{5}$
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- 2 Without using your calculator, work out $\frac{5}{6} - \left(\frac{1}{2} \times 1\frac{1}{2}\right)$.

Write down all the steps of your working.

Answer [3]

MARK SCHEME:

	$\left[\frac{1}{2} \times 1\frac{1}{2} = \right] \frac{3}{4}$ oe $\frac{5 \times 2}{6 \times 2}$ and $\frac{3 \times 3}{4 \times 3}$ oe or better $\frac{1}{12}$ oe working must be shown	B1 M1FT A1	
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03 Without using a calculator, work out $1\frac{1}{4} - \frac{7}{9}$.

Write down all the steps in your working.

Answer [3]

MARK SCHEME:

	$\frac{5}{4}$ oe $\frac{5 \times 9}{4 \times 9}$ and $\frac{7 \times 4}{9 \times 4}$ oe or better $\frac{17}{36}$ oe working must be shown	B1 M1 FT A1	Do not allow decimals for the B1 , M1 , or A1 e.g. $\frac{45}{36}$ and $\frac{28}{36}$ Follow through <i>their</i> $\frac{5}{4}$ for the M1 mark. Alt method 1: B1 for $\frac{1}{4} + \frac{2}{9}$ M1 for $\frac{1 \times 9}{4 \times 9}$ and $\frac{2 \times 4}{4 \times 9}$ oe e.g. $\frac{9}{36}$ and $\frac{8}{36}$ Alt method 2: B1 for $\frac{1}{4} - \frac{7}{9} + 1$ M1 for oe e.g. $\frac{9}{36}$ and $\frac{8}{36}$ ISW converting fraction answer to a decimal.
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- 4 Without using a calculator, work out $1\frac{4}{5} \div \frac{3}{7}$.

Show all your working and give your answer as a fraction in its lowest terms.

Answer [3]

MARK SCHEME:

$\frac{9}{5}$	B1	or $\frac{63}{35}$
their $\frac{9}{5} \times \frac{7}{3}$ or $\frac{9 \times 7}{5 \times 3}$	M1	or their $\frac{63}{35} \div \frac{3}{7}$ or equivalent division with fractions with common denominators
$\frac{21}{5}$ or $4\frac{1}{5}$ or 4.2	A1	

05 Without using a calculator, work out $\frac{4}{5} \div 2\frac{2}{3}$.

Write down all the steps of your working and give your answer as a fraction in its simplest form.

Answer [3]

MARK SCHEME:

$\frac{8}{3}$	B1	or $\frac{40}{15}$ accept $\frac{3}{8}$ or $\frac{15}{40}$
$\frac{4}{5} \times \textit{their} \frac{3}{8}$ oe	M1	or $\frac{12}{15} \div \textit{their} \frac{40}{15}$ or equivalent division with fractions with common denominators
$\frac{3}{10}$ cao	A1	

- 6 Without using a calculator, work out $1\frac{7}{8} \div \frac{5}{9}$.

Show all your working and give your answer as a fraction in its lowest terms.

Answer [3]

MARK SCHEME:

$\frac{15}{8}$	B1	or $\frac{135}{72}$
<i>their</i> $\frac{15}{8} \times \frac{9}{5}$ oe	M1	or $\frac{135}{72} \div \frac{40}{72}$ or equivalent division with fractions with common denominators
$\frac{27}{8}$ or $3\frac{3}{8}$ cao	A1	

07 Without using a calculator, work out $\frac{6}{7} \div 1\frac{2}{3}$.

Show all your working and give your answer as a fraction in its lowest terms.

..... [3]

MARK SCHEME:

$\frac{6}{7} \times \frac{3}{5}$ or $\frac{18}{21} \div \frac{35}{21}$ oe $\frac{18}{35}$ cao	M2 A1	B1 for $\frac{5}{3}$ oe or M1 for $\frac{6}{7} \times \textit{their} \frac{3}{5}$
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- 8 **Without using a calculator**, work out $2\frac{5}{8} \times \frac{3}{7}$.
Show all your working and give your answer as a mixed number in its lowest terms.

..... [3]

MARK SCHEME:

$\frac{21}{8} \times \frac{3}{7}$ oe	M1	Must be shown
$1\frac{1}{8}$ cao final answer	A2	A1 for $\frac{9}{8}$ oe e.g. $\frac{63}{56}$

9 Without using a calculator, work out $\frac{1}{12} \times 1\frac{1}{5}$.

Show all your working and give your answer as a fraction in its lowest terms.

..... [2]

MARK SCHEME:

$\frac{1}{12} \times \frac{6}{5}$ oe	M1	Must be shown
$\frac{1}{10}$ final answer cao	A1	

10 Without using a calculator, work out $1\frac{2}{3} + \frac{5}{7}$.

Write down all the steps of your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

$\frac{14(\text{or } 35)}{21} + \frac{15}{21}$	M1	accept $\frac{14k(\text{or } 35k)}{21k} + \frac{15k}{21k}$
$2\frac{8}{21}$ cao	A2	or A1 for $\frac{50}{21}$ or $1\frac{8}{21}$ or $\frac{29}{21}$ or $1\frac{29}{21}$