

SMART EXAM RESOURCES
0580 IGCSE MATH EXTENDED

TOPIC: NUMBERS

SUB-TOPIC: WRITING AS A MIXED NUMBER

SET-2-QP-MS

01 Without using a calculator, work out $2\frac{1}{7} \div \frac{5}{9}$.

You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

$\frac{15}{7} \times \frac{9}{5}$ oe or $\frac{135}{63} \div \frac{35}{63}$ oe with common denominator	M2	B1 for $\frac{15}{7}$ oe or M1 for $\frac{their\ 15}{7} \times \frac{9}{5}$ oe
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- 2 **Without using a calculator**, work out $5\frac{11}{12} + 2\frac{1}{4}$.
 You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

<table border="1"> <tr> <td data-bbox="228 1525 427 1637">$\frac{k}{12} + \frac{27}{12}$</td> <td data-bbox="435 1525 635 1637">[5] $\frac{11}{12}$ and</td> </tr> <tr> <td data-bbox="228 1648 427 1760">or $\frac{71}{12} + \frac{c}{12}$ oe</td> <td data-bbox="435 1648 635 1760">[2] $\frac{3}{12}$ oe</td> </tr> </table>	$\frac{k}{12} + \frac{27}{12}$	[5] $\frac{11}{12}$ and	or $\frac{71}{12} + \frac{c}{12}$ oe	[2] $\frac{3}{12}$ oe	M1	Accept with other correct common denominators e.g. 24, 36, 48 such as $\frac{71f}{12f}$ and $\frac{27f}{12f}$
$\frac{k}{12} + \frac{27}{12}$	[5] $\frac{11}{12}$ and					
or $\frac{71}{12} + \frac{c}{12}$ oe	[2] $\frac{3}{12}$ oe					
$8\frac{1}{6}$ cao	A2	A1 for fraction equivalent to $8\frac{1}{6}$ e.g. $\frac{49k}{6k}$ or $8\frac{1k}{6k}$ or $7\frac{7}{6}$				

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

You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

$\frac{8}{3}$ and $\frac{11}{4}$ oe improper fractions	M1	
$\frac{88}{12}$ oe improper fraction	A1	
$7\frac{1}{3}$ cao final answer	A1	dep on 1 st A1 If M0 scored SC1 for $\frac{8}{3}$ or $\frac{11}{4}$ oe improper fraction

- 4 **Without using a calculator**, work out $1\frac{1}{7} \times 2\frac{1}{10}$.
 You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

$\frac{8}{7}$ and $\frac{21}{10}$ oe improper fractions	M1	
$\frac{168}{70}$ oe improper fractions	A1	
$2\frac{2}{5}$ cao final answer	A1	Dep. on first A1 If M0 scored SC1 for $\frac{8}{7}$ or $\frac{21}{10}$ oe improper fractions

- 5 Without using a calculator, work out $1\frac{5}{6} + \frac{2}{5}$.
 You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

$\frac{25 \text{ or } 55}{30}$ and $\frac{12}{30}$	M1	Accept $\frac{25k \text{ or } 55k}{30k}$ and $\frac{12k}{30k}$
$2\frac{7}{30}$ cao	A2	A1 for $\frac{67k}{30k}$ or $1\frac{37k}{30k}$

- 06 Without using a calculator**, work out $\frac{11}{12} + \frac{3}{4}$.
 You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

MARK SCHEME:

$\frac{11}{12} + \frac{9}{12}$ oe	M1	Allow any correct common denominator 12k
$1\frac{2}{3}$ cao	A2	A1 for $\frac{20}{12}$ or equivalent improper fraction or mixed number

7 Without using a calculator, work out $\frac{1}{3} + \frac{5}{6}$.

You must show all your working and give your answer as a mixed number in its simplest form.

..... [2]

MARK SCHEME:

$\frac{2}{6} + \frac{5}{6}$ oe	M1	i.e. correct fractions with common denominator $6k$
$1\frac{1}{6}$ cao	A1	

8 $y = \frac{2}{x^2} + \frac{x^2}{2}$

Find the value of y when $x = 6$.

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

Answer $y = \dots\dots\dots$ [2]

MARK SCHEME:

$18\frac{1}{18}$	2	M1 for $\frac{2}{36} + \frac{36}{2}$ or better
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