SMART EXAM RESOURCES
0580 IGCSE MATH EXTENDED
TOPIC: NUMBERS
SUB-TOPIC: SUMS INVOLVING PROPER FRACTIONS
SET-2-QP-MS

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

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

..... [2]

MARK SCHEME:

	$\frac{18}{30}$ and $\frac{5}{30}$ oe must be shown	**M1**	$\frac{18k}{30k}$ and $\frac{5k}{30k}$
	$\frac{23}{30}$ cao	**A1**	

2 **(a)** Write $\frac{11}{3}$ as a mixed number.

..... [1]

(b) **Without using a calculator**, work out $\frac{1}{4}+\frac{5}{12}$.
Show all the steps of your working and give your answer as a fraction in its lowest terms.

..... [2]

MARK SCHEME:

(a)	$3\frac{2}{3}$ cao	**1**	
(b)	$\frac{3}{12}$[and $\frac{5}{12}$] oe	**M1**	For correct method to find common denominator e.g. $\frac{12}{48}$ and $\frac{20}{48}$
	$\frac{2}{3}$ cao	**A1**	

3 **Without using a calculator**, work out $\frac{1}{15}+\frac{2}{5}$.

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

..... [2]

MARK SCHEME:

	$\left[\frac{1}{15}+\right]\frac{2\times3}{5\times3}$	**M1**	or better e.g. $\left[\frac{1}{15}+\right]\frac{6}{15}$ Allow any correct common denominator $15k$
	$\frac{7}{15}$ cao	**A1**	

4 Work out $\frac{7}{11}$ of 198 kg.

..... kg [1]

MARK SCHEME:

	126	1	

5 **Without using a calculator**, work out $\frac{1}{4} \div \frac{2}{3}$.

You must show all your working and give your answer as a fraction.

..... [2]

MARK SCHEME:

	$\frac{1}{4} \times \frac{3}{2}$ or $\frac{3}{12} \div \frac{8}{12}$ oe	**M1**	
	$\frac{3}{8}$ oe	**A1**	Accept equivalent fractions

6 **Without using a calculator**, work out $\frac{2}{3} + \frac{1}{4} \times \frac{2}{3}$.

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

..... [4]

MARK SCHEME:

	$\frac{2}{12}$ oe or $\frac{1}{2} \times \frac{1}{3}$	$\frac{2}{3}\left(1+\frac{1}{4}\right)$	**M1**	**M1** for correct first step to deal with multiplication
	$\frac{8}{12}[+]\frac{2}{12}$ oe	$\frac{2}{3} \times \frac{5}{4}$	**M1**	**M1** for correct working for common denominator with *their* $\frac{2}{12}$ oe or correct evaluation of bracket
	$\frac{5}{6}$ cao		**A2**	**A1** for $\frac{10}{12}$ oe

7 **Without using your calculator**, work out the following.
Show all the steps of your working and give each answer as a fraction in its simplest form.

(a) $\frac{11}{12} - \frac{1}{3}$

Answer(a) ..... [2]

(b) $\frac{1}{4} \div \frac{11}{13}$

Answer(b) ..... [2]

MARK SCHEME:

(a)	$\frac{11}{12} - \frac{4}{12}$ oe $\frac{7}{12}$ **cao ww 0**	**2**	**M1** correct use of a common denominator **A1**
(b)	$\frac{1}{4} \times \frac{13}{11}$ oe $\frac{13}{44}$ **cao ww 0**	**2**	**M1** inversion and operation change **A1**

8 Work out the value of

$$\frac{-\frac{1}{2}-\frac{3}{8}}{-\frac{1}{2}+\frac{3}{8}}.$$

Answer [2]

MARK SCHEME:

	7	2*	**B1** for one of -7/8, -1/8, -14/16, -2/16, -0.875, -0.125

9 Calculate

$$\frac{5^2}{2^5}$$

(a) giving your answer as a fraction,

Answer (a) ..... [1]

(b) giving your answer as a decimal.

Answer (b) [1]

MARK SCHEME:

	(a) **(b)**	25/32 0.781 (25)	1 1√	