NAME _____ **INDEX NUMBER** _____

SCHOOL _____ **DATE** _____

FRACTIONS

KCSE 1989 – 2012 Form 1 Mathematics *Answer all the questions*		Working space
1.	**1990 Q4 P1** A farmer distributed his bags of cabbages as follows: A certain hospital received a quarter of the total number of bags. A nearby school received half of the remainder. Agreen grocer received a third of what the school received. What remained was six more than what the green grocer received. How many bags of cabbages did the farmer have? (3 marks)	
2.	**2000 Q 15 P1** Three people Korir, Wangare and Hassan contributed money to start a business. Korir contributed a quarter of the total amount and Wangare two fifths of the remainder. Hassan's contribution was one and a half times that of Korir. They borrowed the rest of the money from the bank which was Kshs 60, 000 less than Hassan's contribution, find the total amount required to start the business.	

		Working space
3.	**2001 Q1 P2** Evaluate $^1/_3$ of $(2^3/_4 - 5^1/_2)$ x $3\ ^6/_7 \div {}^9/_4$	
4.	**2001 Q3 P2** Three people Odawa,Mliwa and Amina contributed money to purchase a flour mill.Odawa contributed $\frac{1}{3}$ of the total amount,Mliwa contributed $\frac{3}{8}$ of the remaining amount and Amina contributed the rest of the money. The difference in contribution between Mliwa and Amina was shs.40,000. Calculate the price of the flour mill.	
5.	**2003 Q 1 P1** Work out the following, giving the answer as a mixed number in its simplest form. $\frac{\frac{2}{5} \div \frac{1}{2} of \frac{4}{9} - 1\frac{1}{10}}{\frac{1}{8} - \frac{1}{6} \times \frac{3}{8}}$	Working space

6.	**2005 Q 1 P1** Evaluate $$\frac{\frac{3}{4}+1\frac{5}{7}\div\frac{4}{7}of\,2\frac{1}{3}}{\left(1\frac{3}{7}-\frac{5}{8}\times\frac{2}{3}\right)}$$ (3 marks)	
7.	**2009 Q 2 P1** Without using a calculator evaluate $\frac{2\frac{1}{2}+\frac{1}{5}\div\frac{5}{6}of\,2\frac{2}{5}}{1\frac{7}{10}}$ leaving the answer as a fraction in its simplest form (3 marks)	
8.	**2010 Q2 P1** Kutu withdrew some money from a bank. He spent $^{3}/_{8}$ of the money to pay for Mutua's school fees and $^{2}/_{5}$ to pay for Tatu's fees. If he remained with Ksh 12, 330, calculate the amount of money he paid for Tatu's school fees. (4 marks)	Working space

9.	**2011 Q 1 P1** Without using a calculator, evaluate: $$\frac{2\,{}^{1}/_{5} + {}^{2}/_{3}\ of\ 3\,{}^{3}/_{4} - 4\,{}^{1}/_{6}}{1\,{}^{1}/_{4} - 2\,{}^{2}/_{5} \div 1\,{}^{1}/_{3} + 3\,{}^{3}/_{4}}$$ (3 marks)	
10.	**2012 Q1 P1** Without using a calculator, evaluate (4 marks) $$\frac{1\frac{1}{5} - 1\frac{1}{3}}{\frac{1}{8} - \left(-\frac{1}{2}\right)^{2}} - \frac{7}{15}\ of\ 2$$	

FRACTIONS MARKING SCHEME

NO	SOLUTION	MARKS
1.	½ of ¾ = $^3/_8$ $^1/_3$ of $^3/_8$ = $^1/_8$ ¼ + $^3/_8$ + $^1/_8$ = $\frac{2+3+1}{8}$ = $^6/_8$ = $^3/_4$ ¼ - $^1/_8$ = $\frac{2-1}{8}$ = $^1/_8$ 6 x $^8/_1$ =48 bags **1990Q4**	3M
2	Korir , wangari, Hassan $\frac{1}{4}$ x $\frac{2}{5}$ x $\frac{3}{4}$ c or $\frac{3x}{10}$ or $\frac{3}{2}$ x $\frac{1}{4}$ x or $\frac{3x}{8}$ Bank x – $\left\{\frac{1X}{4} \times \frac{3X}{10} + \frac{3X}{8}\right\}$ = $\frac{3x}{40}$ $\frac{3}{8}$ x $\frac{-3x}{40}$ = 60000 x = 200000 **2000Q15**	M1 M1 M1 A1 4 marks
3.	$^1/_3$ x $\left(^{11}/_4 - ^{22}/_4\right)$ x $^{27}/_7$ x $^4/_9$ $^1/_3$ x $^{11}/_4$ x $^{27}/_7$ x $^4/_9$ = $^{-11}/_7$ **2001Q1**	M1 A1
4.	mliwa $\frac{3}{8}$ x $\frac{2}{3}x$ = $\frac{1}{4}x$ Amina x - $\left[\frac{1}{3} + \frac{1}{4}\right]x = \frac{5}{12}x$ $\frac{5}{12}x$ - $\frac{1}{4}x$ = 40000 $\frac{2}{12}x$ = 40000 x = 240000 **2001Q3**	B1 M1 A1
5.	$\frac{1}{2}$ x $\frac{4}{9}$ = $\frac{2}{9}$ $\frac{2}{5}$ x $\frac{9}{2}$ = $\frac{9}{5}$ $\frac{9}{5}$ - $\frac{11}{10}$ or $\frac{18-11}{10}$ = $\frac{7}{10}$ 1 x 3 = 1 6 8 16	M1 M1 A1 3 marks
	$\frac{7}{10}$: $\frac{1}{16}$ = $\frac{7 \times 16}{10}$ =$11^1/_5$ **2003Q1**	
6.	$\frac{¾ + 1\,^5/_7 \div {}^4/_7 \text{ x } 2\,^1/_3}{(1\,^3/_7 - {}^5/_8) \text{ x } {}^2/_3}$ = $\frac{¾ + 1\,^2/_7 \text{ x } {}^7/_4 \text{ x } {}^7/_3}{(1\,24 - 35) \text{ x } {}^2/_3}$ 56 Num ¾ + $^{12}/_7$ x $^7/_4$ x $^7/_3$ = 3 ¼ Deno. $^{45}/_{56}$ x $^2/_3$ = $^{15}/_{28}$ 3 ¼ x $^{28}/_{15}$ = $14\,^7/_{15}$ **2005Q1**	M1 M1 A1
7.	$\frac{2\,¼ + {}^3/_5 \text{ of } 2\,^2/_5}{1\,^7/_{10}}$ = $\frac{2\,¼ + {}^3/_5 \text{ x } {}^6/_5 \text{ x } {}^5/_{12}}{1\,^7/_{10}}$ = $\frac{2\,¼ + {}^3/_5 \text{ x } ½}{1\,^7/_{10}}$ = $(2\,¼ + {}^3/_{10}) \div 1^7/_{10}$ = $^{51}/_{20}$ x $^{10}/_{17}$ = $^3/_2$ or 1 ½ **2009Q2**	M1 M1 A1 3 marks
8.	Total fractions: $^3/_8 + {}^2/_5 = {}^{31}/_{40}$ Remaining fraction = 1 - $^{31}/_{40}$ = $^9/_{40}$ B1 Original amount = Sh 12330 x $^{40}/_9$ = sh 54,800 Tatu's fees = sh $^2/_5$ x 54800 = sh 21 920 **2010Q2**	M1 M1 A1 M1
9.	$\frac{2^1/_2 + {}^2/_3 \text{ x } {}^{15}/_4 - 4^1/_6 = {}^8/_{15}}{1^1/_4 - {}^{12}/_5 \text{ x } ¾ + 3^3/_4 \; 3^1/_3}$ $^8/_{15}$ x $^5/_6$ = $^1/_6$ **2011Q1**	M1 M1 A1 3
10	$\frac{\frac{6}{5} - \frac{4}{3}}{\frac{1}{8} - \frac{1}{4}} - \frac{14}{15}$ $\frac{\frac{-2}{15}}{\frac{-1}{8}} - \frac{14}{15}$ $= \frac{16}{15} - \frac{14}{15}$ $= \frac{2}{15}$ **2012Q1**	M1 M1 M1 A1 4