Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Algebraic Fractions 1

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

Total Marks :

1) Express $\frac{1}{4v}+\frac{2}{3v}$ as a single fraction in its simplest form.

Answer _____ [3]

2) Simplify $\frac{2}{3c}-\frac{1}{4c}$

Answer _____ [2]

3) Express the following as a single fraction in its simplest form. [4]

$$\frac{7}{x-3} - \frac{4}{3x+5}$$

4) Express $\frac{3x}{3x+2} - \frac{2x}{2x+7}$ as a single fraction in its simplest form. [3]

5) Express $\frac{4}{2x-3} + \frac{8}{x+6}$ as a single fraction in its simplest form. [3]

6) Express $\frac{x}{x-3} - \frac{x}{x+6}$ as a single fraction in its simplest form.

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[3]

7) Solve $\frac{8x-5}{3} + \frac{4x+5}{4} = \frac{149}{12}$.

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[4]

8) Solve the equation $\frac{4x-5}{2}+\frac{7x-10}{5}=4$. [4]

9) Solve the following equation.

$$\frac{3x-1}{4} - \frac{x+6}{3} = \frac{3}{2}$$

[4]

10) Solve $\frac{10}{2x-5} + \frac{7}{x+2} = 3$

A solution by trial and improvement will not be accepted.

Answer _____ [6]

11) Solve the following equation. [7]

$$\frac{8}{2x-1}+\frac{5x+9}{3x+1}=4$$

12) Solve

$$2(x-1)+\frac{2}{x-1}=5$$

Show your working.
A solution by trial and improvement will not be accepted.

Answer $x =$ _____ [6]

13) Solve the equation $\frac{2x+5}{x} + \frac{6}{x-2} = 5$

Show your working.
A solution by trial and improvement will not be accepted.

Answer _____ [7]

14) Prove that $\frac{2x+3}{4} - \frac{3x-2}{3} + \frac{1}{6} \equiv \frac{19-6x}{12}$.

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[5]

15) Prove that $\dfrac{t}{t-1} - \dfrac{t-1}{t} \equiv \dfrac{2t-1}{t(t-1)}$

[4]