

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Algebraic Fractions 2

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 $\frac{2a}{5} - \frac{a}{4}$ as a single fraction.

Answer _____ [3]

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

$$\frac{3}{4} + \frac{1}{2x+7}$$

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

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

$$\frac{5}{y+4} - \frac{3}{2y-1}$$

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5) Express the following as a single fraction in its simplest terms.

[3]

$$\frac{2x-3}{3} - \frac{x+5}{4}$$

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6) Solve the following equation.

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$$\frac{5x-1}{2} - x = \frac{1}{2}$$

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7) Solve the following equation

$$\frac{8x + 1}{3} - \frac{4x + 7}{2} = \frac{1}{2}$$

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[4]

8) Solve the following equation.

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

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9) Solve the equation $\frac{2x-4}{5} + \frac{x+11}{2} = 2$

Show your working.

A solution by trial and improvement will not be accepted.

Answer $x =$ _____ [4]

10)

Solve the equation $\frac{4x-3}{2} + \frac{7x+1}{6} = \frac{29}{2}$.

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11) Solve the equation $\frac{x+2}{2} - \frac{2x-1}{3} = 2$

Show your working.

A solution by trial and improvement will not be accepted.

Answer $x =$ _____ [4]

12) Solve the equation $\frac{2x-5}{3} + \frac{4x+3}{4} = 2$

Show your working.

A solution by trial and improvement will not be accepted.

Answer $x =$ _____ [4]

13) Solve $\frac{2x + 1}{3} + \frac{6x - 5}{2} = 7$

Show your working.

A solution by trial and improvement will not be accepted.

Answer $x =$ _____ [4]

14) Solve

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

A solution by trial and improvement will not be accepted.

Answer $x =$ _____ [7]

17) Prove that

$$\frac{n+1}{n-1} - \frac{2n}{n+1} + 1 \equiv \frac{4n}{n^2-1}$$

[4]