**Algebraic Fractions Revision**

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| Name : | Class : | Date : |

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| Mark : | /30 | % |

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| **1)** Simplify the following      a)  $\frac{15-10z}{5}$     b)  $\frac{54y-48}{45y-40}$     c)  $\frac{20x^{2}-15x}{12x-9}$ | [6]   |
|      d)  $\frac{c^{2}+16c+63}{c+7}$     e)  $\frac{y+7}{y^{2}+4y-21}$     f)  $\frac{z^{2}+14z+48}{z^{2}+11z+24}$ |  |
| **2)** Express as a single fraction      a)  $\frac{9x}{14}-\frac{3x}{28}$     b)  $\frac{4x}{5}-\frac{4x}{7}$     c)  $\frac{x+8}{7}-\frac{x}{4}$ | [4]   |
|      d)  $\frac{x-6}{5}-\frac{x-7}{4}$ |  |
| **3)** Solve the following algebraic fraction      a)  $\frac{1}{5}(c+6)=4$     b)  $\frac{1}{4}(x-1)=8$     c)  $\frac{5}{6}(x+5)=30$ | [12]   |
|      d)  $-\frac{x}{8}=7$     e)  $\frac{7y}{3}=21$     f)  $\frac{a}{28}=\frac{3}{4}$ |  |
|      g)  $\frac{9y}{20}=\frac{36}{5}$     h)  $\frac{a+6}{14}=\frac{5}{7}$     i)  $\frac{z-6}{7}=\frac{z}{10}$ |  |
|      j)  $\frac{2c+7}{2}=\frac{c+8}{4}$     k)  $\frac{y}{3}+\frac{y}{9}=4$     l)  $\frac{8z}{2}+\frac{z}{3}=39$ |  |
| **4)** Solve the equation and leave your answer as a fraction or a decimal to 3 significant figures        $\frac{3}{c+7}=2$ | [1]   |
| **5)** Solve the equation      a)  $\frac{1}{7}-\frac{1}{a+2}=\frac{1}{6}$     b)  $\frac{1}{x+8}+\frac{1}{3}=\frac{1}{4}$     c)  $y+\frac{10}{y}=7$ | [6]   |
|      d)  $4+y=\frac{12}{y}$     e)  $1=c-\frac{2}{c}$     f)  $1+\frac{6}{z}=z$ |  |
| **6)** Solve the equation leaving your answer as a fraction or decimal to 3 significant figures        $\frac{z}{z-8}+\frac{1}{z}=1$ | [1]   |

**Solutions for the assessment Algebraic Fractions Revision**

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| **1)**  a)  $\frac{3-2z}{1}$ |      b)  $\frac{6}{5}$ |
|      c)  $\frac{5x}{3}$ |      d)  $c+9$ |
|      e)  $\frac{1}{y-3}$ |      f)  $\frac{z+6}{z+3}$ |
| **2)**  a)  $\frac{15x}{28}$ |      b)  $\frac{8x}{35}$ |
|      c)  $\frac{-3x+32}{28}$ |      d)  $\frac{-x+11}{20}$ |
| **3)**  a) 14 |      b) 33 |
|      c) 31 |      d) -56 |
|      e) 9 |      f) 21 |
|      g) 16 |      h) 4 |
|      i) 20 |      j) -2 |
|      k) 9 |      l) 9 |
| **4)**  $-5.5or-\frac{11}{2}$ |  |
| **5)**  a) -44 |      b) -20 |
|      c)  $y=5$ or  $y=2$ |      d)  $y=-6$ or  $y=2$ |
|      e)  $c=2$ or  $c=-1$ |      f)  $z=3$ or  $z=-2$ |
| **6)** 8/9 or 0.889 |  |