**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)  $\frac{42a+48}{12}$     b)  $\frac{24b+28}{30b+35}$     c)  $\frac{18y^{2}+12y}{15y+10}$ | [6]   |
|      d)  $\frac{a^{2}+14a+45}{a+9}$     e)  $\frac{z-7}{z^{2}-3z-28}$     f)  $\frac{b^{2}+3b+2}{b^{2}+6b+8}$ |  |
| **2)** Express as a single fraction      a)  $\frac{10x}{11}-\frac{x}{44}$     b)  $\frac{x}{3}+\frac{5x}{11}$     c)  $\frac{x}{4}-\frac{x-6}{3}$ | [4]   |
|      d)  $\frac{x-2}{5}+\frac{x+7}{3}$ |  |
| **3)** Solve the following algebraic fraction      a)  $\frac{1}{7}(b+7)=6$     b)  $\frac{y-8}{5}=4$     c)  $5(\frac{x+8}{3})=30$ | [12]   |
|      d)  $-\frac{b}{3}=9$     e)  $\frac{7x}{8}=28$     f)  $\frac{a}{81}=\frac{2}{9}$ |  |
|      g)  $\frac{2c}{27}=\frac{8}{3}$     h)  $\frac{a+6}{64}=\frac{3}{8}$     i)  $\frac{c-7}{3}=\frac{c}{10}$ |  |
|      j)  $\frac{3x+7}{8}=\frac{x+7}{2}$     k)  $\frac{y}{4}+\frac{y}{8}=3$     l)  $\frac{6x}{3}+\frac{x}{8}=17$ |  |
| **4)** Solve the equation and leave your answer as a fraction or a decimal to 3 significant figures        $\frac{8}{c+7}=1$ | [1]   |
| **5)** Solve the equation      a)  $\frac{1}{2}-\frac{1}{c+9}=\frac{1}{4}$     b)  $\frac{1}{a+7}+\frac{1}{3}=\frac{1}{6}$     c)  $c-\frac{45}{c}=4$ | [6]   |
|      d)  $y-6=\frac{7}{y}$     e)  $11=x+\frac{18}{x}$     f)  $16-\frac{63}{x}=x$ |  |
| **6)** Solve the equation leaving your answer as a fraction or decimal to 3 significant figures        $\frac{y}{y+8}+\frac{1}{y}=1$ | [1]   |

**Solutions for the assessment Algebraic Fractions Revision**

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| **1)**  a)  $\frac{7a+8}{2}$ |      b)  $\frac{4}{5}$ |
|      c)  $\frac{6y}{5}$ |      d)  $a+5$ |
|      e)  $\frac{1}{z+4}$ |      f)  $\frac{b+1}{b+4}$ |
| **2)**  a)  $\frac{39x}{44}$ |      b)  $\frac{26x}{33}$ |
|      c)  $\frac{-x+24}{12}$ |      d)  $\frac{8x+29}{15}$ |
| **3)**  a) 35 |      b) 28 |
|      c) 10 |      d) -27 |
|      e) 32 |      f) 18 |
|      g) 36 |      h) 18 |
|      i) 10 |      j) -21 |
|      k) 8 |      l) 8 |
| **4)**  $1or1$ |  |
| **5)**  a) -5 |      b) -13 |
|      c)  $c=9$ or  $c=-5$ |      d)  $y=7$ or  $y=-1$ |
|      e)  $x=9$ or  $x=2$ |      f)  $x=9$ or  $x=7$ |
| **6)** 8/7 or 1.14 |  |