Answers - Advanced Simultaneous Equations

1 **a** $x = 5, y = 6$ or $x = 6, y = 5$

b $x = 0, y = 1$ or $x = \frac{4}{5}, y = -\frac{3}{5}$

c $x = -1, y = -3$ or $x = 1, y = 3$

d $x = 4\frac{1}{2}, y = 4\frac{1}{2}$ or $x = 6, y = 3$

e $a = 1, b = 5$ or $a = 3, b = -1$

f $u = 1\frac{1}{2}, v = 4$ or $u = 2, v = 3$

2 $(-11, -15)$ and $(3, -1)$

3 $(-1\frac{1}{6}, -4\frac{1}{2})$ and $(2, 5)$

4 **a** $x = -1\frac{1}{2}, y = 5\frac{3}{4}$ or $x = 3, y = -1$

b $x = 3, y = \frac{1}{2}$ or $x = 6\frac{1}{3}, y = -2\frac{5}{6}$

5 **a** $x = 3 + \sqrt{13}, y = -3 + \sqrt{13}$ or $x = 3 - \sqrt{13}$, $y = -3 - \sqrt{13}$

b $x = 2 - 3\sqrt{5}, y = 3 + 2\sqrt{5}$ or $x = 2 + 3\sqrt{5}$, $y = 3 - 2\sqrt{5}$