Surds

Name:	Class:	Date:

Mark	/ 10	%

1) Simplify the following [4]

a) $6\sqrt{7} + 4\sqrt{7}$

b) $\sqrt{150}$

c) $\sqrt{6} \times \sqrt{21}$

d) $-7\sqrt{2} + 10\sqrt{8}$

2) Expand and simplify the following [2]

a) $(4 + \sqrt{2})(2 - \sqrt{5})$

b) $(5\sqrt{a} + 4\sqrt{x})(5\sqrt{a} - 4\sqrt{x})$

3) Rationalise the denominator [4]

a) $\frac{3}{\sqrt{2}}$

b) $\frac{9}{\sqrt{18}}$

c) $\frac{7}{6 + \sqrt{6}}$

d) $\frac{12}{2 + \sqrt{10}}$

Solutions for the assessment Surds

1) a) $10\sqrt{7}$

b) $5\sqrt{6}$

c) $3\sqrt{14}$

d) $13\sqrt{2}$

2) a) $8 - 4\sqrt{5} - \sqrt{10} + 2\sqrt{2}$

b) $25a - 16x$

3) a) $\frac{3\sqrt{2}}{2}$

b) $\frac{3\sqrt{2}}{2}$

c) $\frac{42 - 7\sqrt{6}}{30}$

d) $-4 + 2\sqrt{10}$