

Name \_\_\_\_\_

# Rational and Irrational Numbers

Simplify by rationalising the denominator.

$(1) \frac{6 - 4\sqrt{3}}{6 + 4\sqrt{3}}$ $(4\sqrt{3} - 7)$	$(2) \frac{3 + \sqrt{2}}{3 + \sqrt{2}}$ $\frac{11 + 6\sqrt{2}}{7}$
$(3) \frac{\sqrt{11} + \sqrt{7}}{\sqrt{11} + \sqrt{7}}$ $\frac{9 - \sqrt{77}}{2}$	$(4) \frac{4 + 3\sqrt{5}}{4 - 3\sqrt{5}}$ $\frac{-(61 + 24\sqrt{5})}{29}$
$(5) \frac{7\sqrt{3} - 5\sqrt{2}}{\sqrt{48} + \sqrt{18}}$ $\frac{114 - 41\sqrt{6}}{30}$	$(6) \frac{2\sqrt{6} - \sqrt{5}}{3\sqrt{5} - 2\sqrt{6}}$ $\frac{4\sqrt{30} + 9}{21}$