

# Lecture 31: Worksheet

## Partial fractions

1 Integrate  $\frac{1}{1+x}$ .

2 Integrate  $\frac{9}{(x-1)^2}$ .

3 Integrate  $\frac{7}{x^2+1}$ .

4 Integrate  $\frac{1}{1-x^4}$ .

Hint: write the last one first in the form

$$A/(x^2 - 1) + B/(1 + x^2)$$