

# Assignment 6 (13/1)

...so integrals...much partial fractions...such math...wow!

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## Problem 1

Integrate the following...

(a)  $\frac{x+3}{x^2-3x+2}$

(b)  $\frac{x^3+4x^2-4x-1}{(x^2+1)^2}$

(c)  $\frac{1}{x^4+4}$

(d)  $\frac{1}{a^2-x^2}$

(e)  $\frac{1}{x(a+bx)^2}$

(f)  $x^3 \arctan(x)$

(g)  $\frac{\sqrt{4+x^2}}{x} - \frac{x}{\sqrt{4+x^2}}$

(h)  $\frac{1}{x^3-a^3}$