

Analytical Methods Achat Wooo

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Page 3

Q3

a

i) $\sin x \approx 0.67$
 $x = \sin^{-1}(0.67)$
 $x = 42.10^\circ$

$180 - 42.10 = 137.9^\circ$

ii) $\tan^2 x - 7 \tan x + 10 = 0$
 $(\tan x)^2$

$x^2 - 7x + 10 = 0$

$(x-5)(x-2) = 0$

$\rightarrow (\tan x - 5)(\tan x - 2)$

$\tan x - 5 = 0$

$\tan x - 2 = 0$

$\tan x = 5$

$\tan x = 2$

$\tan x = 5$

$x = \tan^{-1}(5) = 78.69$

$x = 180 + 78.69$

$x = 258.69$

$\tan x = 2$

$x = \tan^{-1}(2) = 63.43$

$x = 180 + 63.43 =$

$x = 243.43$