

b) i) $\cos x = 0.62$

$x = \cos^{-1}(0.62)$

$x = 51.68^\circ, (360 - 51.68^\circ),$

$x = 51.68^\circ, 308.32^\circ$

ii) $7 \sin x = 4$

$\sin x = \frac{4}{7}$

$x = \sin^{-1}(\frac{4}{7})$

$x = 34.85^\circ, (180 - 34.85^\circ)$

$x = 34.85^\circ, 145.15^\circ$

iii) $-5 \tan x = 4$

$\tan x = (\frac{4}{-5})$

$x = \tan^{-1}(\frac{4}{-5})$

$x = -38.66^\circ, (-38.66 + 180), (-38.66 + 360)$

$x = -38.66^\circ, 141.34^\circ, 321.34^\circ$

iv) $-3 \sin x = -2$

$\sin x = -\frac{2}{3}$

$x = \sin^{-1}(-\frac{2}{3})$

$x = 41.81^\circ, (180 - 41.81)$

$x = 41.81^\circ, 138.19^\circ$

c) $x^2 + 3x - 10$

$(x - 2)(x + 5)$

$\therefore (\tan x - 2)(\tan x + 5) = 0$

$\tan x = 2$

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

$x = 63.43^\circ, 243.43^\circ$

$\tan x = -5$

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

$x = -78.69^\circ, 101.31^\circ, 281.31^\circ$