Quadratic Equations Ex 14.2 Q2(iv)

$x^2-(2+i)x-(1-7i)=0$

$\Rightarrow \quad x^2-(2+i)x-(1-7i)=0$

$\Rightarrow \quad x^2-(3-i)x+(1-2i)x-(1-7i)=0$

$\Rightarrow \quad x(x-(3-i))+(1-2i)(x-(3-i))=0$

$\Rightarrow \quad [x+(1-2i)][x-(3-i)]=0$

$\Rightarrow \quad x=-1+2i, \quad 3-i$

Quadratic Equations Ex 14.2 Q2(v)

$ix^2-4x-4i=0$

$\Rightarrow \quad ix^2+4i^2x+4i^3=0 \quad [\because\ i^2=-1]$

$\Rightarrow \quad x^2+4ix+4i^2=0$

$\Rightarrow \quad x^2+2ix+2ix+4i^2=0$

$\Rightarrow \quad x(x+2i)+2i(x+2i)=0$

$\Rightarrow \quad (x+2i)(x+2i)$

$\therefore \quad x=-2i, \quad -2i$

Quadratic Equations Ex 14.2 Q2(vi)

$x^2+4ix-4=0$

$\Rightarrow \quad x^2+4ix+4i^2=0 \quad [\because\ i^2=-1]$

$\Rightarrow \quad x^2+2ix+2ix+4i^2=0$

$\Rightarrow \quad x(x+2i)+2i(x+2i)=0$

$\Rightarrow \quad (x+2i)(x+2i)=0$

$\Rightarrow \quad x=-2i, -2i$

********** END **********