LF 1

Oppgåve 1: a) $-i, 1, i.$ b) $-i, -1, i$

Oppgåve 2: a) $7-3i, -3+11i, 12+5i$ b) $13+11i, 2+10i$
c) $\frac{11}{5}+2i, \frac{-33}{41}+\frac{-10}{41}i$ d) $\frac{5}{26}+\frac{i}{26}, \frac{7}{53}-\frac{2}{53}i$

Oppgåve 3: a) $2, 2\sqrt{2}-i, -8-6i$ b) $\frac{3}{5}(3+4i), -4\frac{2+\pi^2+\pi i}{1+\pi^2}$
c) $2-3i, 4+6i$, d) $-2+6i, -3+4i$

Oppgåve 4: a) $\mathrm{Re}=2, \mathrm{Im}=-3$, b) $\mathrm{Re}=42, \mathrm{Im}=-69$,

Oppgåve 5: $\mathrm{Re}((3-i)^2)=8.\mathrm{Re}(\frac{1}{(3-i)^2})=\frac{4}{50}, \frac{1}{\mathrm{Re}(3-i)^2}=\frac{1}{8}$

Oppgåve 6: a)$z=\frac{3+4i}{2i}=2-\frac{3}{2}i$,
b) $z=\frac{-2-i}{1+i}=-\frac{3}{2}+\frac{1}{2}i$
c) $z=\frac{2+3i}{1-3i}=-\frac{7}{10}+\frac{9}{10}i$