p167 #3, 5, 13, 19, 22, 23, 25, 27, 30, 33, 38, 47, 59, 65

(3) $(a-1)+(b+3)i = 5+8i$

$\boxed{a=6,\ b=5}$

(5) $4+\sqrt{-9} = 4+i\sqrt{9} = \boxed{4+3i}$

(13) $-6i+i^2 = \boxed{-1-6i}$

(19) $(8-i)+(4+i) = \boxed{4}$

(22) $(8+\sqrt{-18})-(4+3\sqrt{2}i) = 8+i\sqrt{18}-4-3i\sqrt{2}$ ($\sqrt{18} = 3\sqrt{2}$)

$= \boxed{4}$

(23) $13i-(14-7i) = 13i-14+7i = \boxed{-14+20i}$

(25) $-\left(\frac{3}{2}+\frac{5}{2}i\right)+\left(\frac{5}{3}+\frac{11}{3}i\right) = -\frac{9}{6}-\frac{15}{6}i+\frac{10}{6}+\frac{22}{6}i$

$= \boxed{\frac{1}{6}+\frac{7}{6}i}$

(27) $(1+i)(3-2i) = 3+3i-2i-2i^2 = 3+i+2 = \boxed{5+i}$

(30) $-8i(9+4i) = -72i-32i^2 = \boxed{32-72i}$

(33) $(4+5i)^2 = 16+20i+20i+25i^2 = \boxed{-9+40i}$

(38) $(7-12i)(7+12i) = 49-144i^2 = \boxed{193}$

(47) $\frac{2}{4-5i}\left(\frac{4+5i}{4+5i}\right) = \frac{8+10i}{16-25i^2} = \boxed{\frac{8}{41}+\frac{10}{41}i}$

(59) $\sqrt{-6}\cdot\sqrt{-2} = i\sqrt{6}\cdot i\sqrt{2} = i^2\sqrt{12} = \boxed{-2\sqrt{3}}$

(65) $x^2-2x+2=0$

$$\frac{-(-2)\pm\sqrt{(-2)^2-4(1)(2)}}{2(1)} = 1\pm\frac{\sqrt{-4}}{2} = 1\pm\frac{2i}{2}$$

$$= \boxed{1\pm i}$$