$$A=(4x-1)^{2}+(x+2)^{2}= 16x^{2}-8x+1+x^{2}+4x+4=17x^{2}-4x+5$$

B = $(5t+4)^{2 }+\left(5t+4\right)\left(5t-1\right)=25t^{2}+40t+16+25t^{2}-5t+20t-4= 50t^{2}+55t+12$