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| **Completing the Square** |
| Write each of these expressions in the form $(x+a)^{2}+b$  |
| **(a)** | **(b)** | **(c)** | **(d)** |
| $$x^{2}+8x+3$$$$=\left(x+4\right)^{2}-16+3$$$$= $$ | $$x^{2}+6x-1$$$$=\left(x+3\right)^{2}- $$$$= $$ | $$x^{2}-4x+11$$$$=\left(x-2\right)^{2}- $$$$= $$ | $$x^{2}-10x-5$$$$=\left(x \right)^{2}- $$$$= $$ |
| **(e)** | **(f)** | **(g)** | **(h)** |
| $$x^{2}-2x+7$$ | $$x^{2}+4x$$ | $$x^{2}-12x+2$$ | $$x^{2}+16x+21$$ |
| **(i)** | **(j)** | **(k)** | **(l)** |
| $$x^{2}+x+4$$ | $$x^{2}+3x-2$$ | $$x^{2}-x+9$$ | $$x^{2}+5x+3$$ |
| **(m)** | **(n)** | **(o)** | **(p)** |
| $$x^{2}-20x+35$$ | $$x^{2}+9x-11$$ | $$x^{2}-7x$$ | $$x^{2}-3x-8$$ |