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| **Fill in the Blanks** | **Completing the Square** $(x^{2}+bx+c)$ |

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| **Quadratic Expression** | $$\left(x+\frac{b}{2}\right)^{2}$$ | $$\left(x+\frac{b}{2}\right)^{2}-\left(\frac{b}{2}\right)^{2}$$ | $$\pm c$$ | **Completed Square** |
| $$x^{2}+10x$$ | $$(x+5)^{2}$$ | $$(x+5)^{2}-25$$ | $$(x+5)^{2}-25$$ | $$(x+5)^{2}-25$$ |
| $$x^{2}+8x-2$$ | $$(x+4)^{2}$$ | $$(x+4)^{2}-16$$ | $$(x+4)^{2}-16-2$$ |  |
| $$x^{2}+2x+5$$ | $$(x+1)^{2}$$ | $$(x+1)^{2}-1$$ |  |  |
| $$x^{2}+4x+7$$ | $$(x+2)^{2}$$ |  |  |  |
| $$x^{2}+6x-11$$ |  |  |  |  |
| $$x^{2}+18x+50$$ |  |  |  |  |
| $$x^{2}-12x$$ | $$(x-6)^{2}$$ | $$(x-6)^{2}-36$$ | $$(x-6)^{2}-36$$ | $$(x-6)^{2}-36$$ |
| $$x^{2}-2x+5$$ | $$(x-1)^{2}$$ | $$(x-1)^{2}-1$$ | $$(x-1)^{2}-1+5$$ |  |
| $$x^{2}-6x-1$$ | $$(x-3)^{2}$$ | $$(x-3)^{2}-9$$ |  |  |
| $$x^{2}-8x+16$$ | $$(x-4)^{2}$$ |  |  |  |
| $$x^{2}-4x+5$$ |  |  |  |  |
| $$x^{2}+7x+1$$ | $$\left(x+\frac{7}{2}\right)^{2}$$ | $$\left(x+\frac{7}{2}\right)^{2}-\frac{49}{4}$$ | $$\left(x+\frac{7}{2}\right)^{2}-\frac{49}{4}+1$$ | $$\left(x+\frac{7}{2}\right)^{2}-\frac{45}{4}$$ |
| $$x^{2}-5x-3$$ |  |  |  |  |
| $$x^{2}+x+6$$ |  |  |  |  |
| $$x^{2}-3x+2$$ |  |  |  |  |
|  |  |  |  | $$\left(x+5\right)^{2}-7$$ |
|  |  |  |  | $$\left(x-\frac{3}{2}\right)^{2}+\frac{3}{4}$$ |