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| **Fill in the Blanks** | **Factorising Harder Quadratics** $(ax^{2}+bx+c)$ |

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| --- | --- | --- | --- | --- | --- |
| **Quadratic** | $$a×c$$ | $×$ **to give** $ac$$+ $**to give** $b$ | **Split the middle term** | **Group and Factorise** | **Factorised Quadratic** |
| $$2x^{2}+7x+6$$ | $$12$$ | $$+4, +3$$ | $$2x^{2}+4x+3x+6$$ | $$2x\left(x+2\right)+3(x+2)$$ | $$(2x+3)(x+2)$$ |
| $$3x^{2}+19x+6$$ | $$18$$ | $$+18, +1$$ | $$3x^{2}+18x+x+6$$ | $$3x\left(x+6\right)+1(x+6)$$ |  |
| $$8x^{2}+6x-9$$ | $$-72$$ | $$+12, -6$$ |  |  |  |
| $$5x^{2}+12x-9$$ |  |  |  |  |  |
| $$9x^{2}-9x-10$$ |  |  |  |  |  |
| $$6x^{2}+x-5$$ |  |  |  |  |  |
| $$8x^{2}-18x+7$$ |  |  |  | $$2x\left(4x-7\right)-1(4x-7)$$ |  |
| $$4x^{2}-12x+5$$ |  |  |  |  |  |
|  |  | $$+15, +2$$ | $$6x^{2}+15x+2x+5$$ |  |  |
|  |  |  |  | $$4x\left(3x-2\right)+5(3x-2)$$ |  |
|  |  |  |  |  | $$(5x-4)(2x+1)$$ |