|  |  |
| --- | --- |
| **Fill in the Blanks** | **Nth Term of a Quadratic Sequence** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sequence** | $$5$$ | $$8$$ | $$13$$ | $$20$$ |  | **Sequence** | $$12$$ | $$15$$ | $$20$$ | $$27$$ |
| **First Difference** |  | $$3$$ | $$5$$ | $$7$$ |  |  | **First Difference** |  | $$3$$ | $$5$$ | $$7$$ |  |
| **Second Difference** |  | $$2$$ | $$2$$ |  |  | **Second Difference** |  |  |  |  |
| $$ 1 n^{2}$$ | $$1$$ | $$4$$ | $$9$$ | $$16$$ |  | $$ n^{2}$$ |  |  |  |  |
| **Sequence minus** $n^{2}$ | $$4$$ | $$4$$ | $$4$$ | $$4$$ |  | **Sequence minus** $n^{2}$ |  |  |  |  |
| **Linear nth term** | $$+4$$ |  | **Linear nth term** |  |
| **Quadratic nth term** | $$n^{2}+4$$ |  | **Quadratic nth term** |  |
|  |  |  |  |  |
| **Sequence** | $$0$$ | $$3$$ | $$8$$ | $$15$$ |  | **Sequence** | $$7$$ | $$13$$ | $$23$$ | $$37$$ |
| **First Difference** |  |  |  |  |  |  | **First Difference** |  | $$6$$ | $$10$$ | $$14$$ |  |
| **Second Difference** |  |  |  |  |  | **Second Difference** |  | $$4$$ | $$4$$ |  |
| $$ n^{2}$$ |  |  |  |  |  | $$2 n^{2}$$ | $$2$$ | $$8$$ | $$18$$ | $$32$$ |
| **Sequence minus** $n^{2}$ |  |  |  |  |  | **Sequence minus** $n^{2}$ |  |  |  |  |
| **Linear nth term** |  |  | **Linear nth term** |  |
| **Quadratic nth term** |  |  | **Quadratic nth term** |  |
|  |  |  |  |  |
| **Sequence** | $$-1$$ | $$5$$ | $$15$$ | $$29$$ |  | **Sequence** | $$11$$ | $$20$$ | $$35$$ | $$56$$ |
| **First Difference** |  |  |  |  |  |  | **First Difference** |  |  |  |  |  |
| **Second Difference** |  |  |  |  |  | **Second Difference** |  |  |  |  |
| $$ n^{2}$$ |  |  |  |  |  | $$ n^{2}$$ |  |  |  |  |
| **Sequence minus** $n^{2}$ |  |  |  |  |  | **Sequence minus** $n^{2}$ |  |  |  |  |
| **Linear nth term** |  |  | **Linear nth term** |  |
| **Quadratic nth term** |  |  | **Quadratic nth term** |  |