# Independent Task <br> To investigate a problem using symmetry 

Mr Critchlow

## To Start

Can you complete the number grid by putting the numbers into the correct places. It's like a crossword but with numbers not letters.

| 3 |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2 |  |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 2 | 3 | 7 | 8 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |


| 3 DIGITS | 4 DIGITS |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 143 | 2018 | 6271 |  |  |
| 265 | 2934 | 7065 |  |  |
| 368 | 3165 | 7931 |  |  |
| 451 | 3648 | 8023 |  |  |
| 527 | 4382 | 9426 |  |  |
| 584 | 4629 | 9487 |  |  |
| 702 |  | 5 DIGITS |  | 6 DIGITS |
|  |  | 15972 | 52876 | 324179 |
|  |  | 23781 | 53462 | 971302 |
|  |  | 27054 | 64217 |  |
|  |  | 31648 | 86015 |  |
|  |  | 32142 | 93205 |  |

## Moving On

Can you complete the blocky picture using the mirror line running through the middle of the image?


## Symmetry Investigation

I think that every regular shape has the same number of lines of symmetry as it does sides.

| Shape | Sides | Lines of <br> Symmetry | Shape | Sides | Lines of <br> Symmetry |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Challenge A

Can you complete this symmetrical picture over these mirror lines?

Start with the bottom right quadrant first and use the dots to help you!


## Challenge A

$\left.\begin{array}{|c|}\hline \text { Can you complete } \\ \text { this symmetrical } \\ \text { picture over the } \\ \text { mirror lines? } \\ \text { Start with the } \\ \text { bottom and work } \\ \text { your way up } \\ \text { making use of the } \\ \text { dots to help you! }\end{array}\right]$


