Finite Differences - Day 1 Notes
$1^{\text {st }}$ Dot Pattern

First Step Second Step Third Step

| step | \# of dots |
| :---: | :---: |
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|  |  |
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|  |  |
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|  |  |

1. What are the independent and dependent variables?
2. Write an expression that can be used to determine the number of dots in the $n$th step?
3. How many dots will there be in the eighth figure of the pattern?
4. How many dots will there be in the twelfth figure of the pattern?
5. Which figure would have 31 dots?
6. What is an appropriate domain?
7. What is an appropriate range?

Finite Differences - Day 1
Notes
$1^{\text {st }}$ Square Pattern


First Step Second Step Third Step

| step | \# of <br> squares |
| :---: | :---: |
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8. What are the independent and dependent variables?
9. Write an expression that can be used to determine the number of squares in the $n$th step?
10. How many squares will there be in the eighth figure of the pattern?
11. How many squares will there be in the tenth figure of the pattern?
12. Which figure would have 62 squares?
13. What is an appropriate domain?
14. What is an appropriate range?
