# Area Laboratory 1

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #: \_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

0. Define **area**.

Find the area of the following figures using your definition. If you need to refine your definition, do so above.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ units2 | 2. | Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ units2 |
| 3. | Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ units2 | 4. | Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ units2 |
| 5. | Try to find a short cut to find the star-shaped area above. If you cannot, feel free to fall back on the method you used above.  Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ units2 | 6. | Use the figures below to conduct an experiment on the area of discs. Record Area versus Radius of each disc in the data table below. |

|  |  |  |
| --- | --- | --- |
| Radius  (units) | Radius2  (units2) | Area  (units2) |
| 0 | 0 | 0 |
| 1 | 1 |  |
| 2 | 4 |  |
| 3 | 9 |  |
| 4 | 16 |  |
| 5 | 25 |  |
| 6 | 36 |  |
| 7 | 49 |  |
| 8 | 64 |  |
| 9 | 81 |  |

Once you fill out the data table, decide whether the graph of Area versus Radius or Area versus Radius2 would make a linear mathematical model. Graph your choice below.

Write your mathematical model here:

Write your interpretation of the slope here:

7. Would you change your definition of **area**? If so, write your new definition below.