1. **Use the help function available inside the field calculator to figure out what each function in the following expression does: trim(right("Name", length("Name") - (strpos("Name", ':')+1)))**

   trim: removes all leading and trailing whitespace (spaces, tabs, etc) from a string.

   right: returns a substring that contains the n rightmost characters of the string.

   length: returns the number of characters in a string or the length of a geometry linestring.

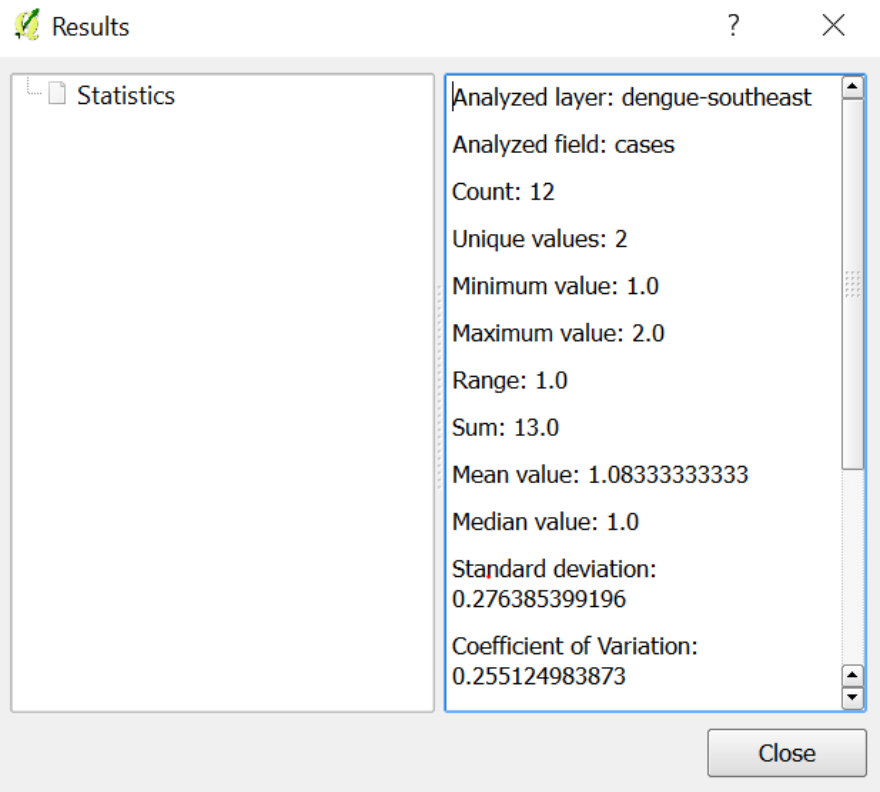
   strops: return the first matching position of a substring within another string, or 0 if the substring is not found.

   Therefore, what the expression does is the following:

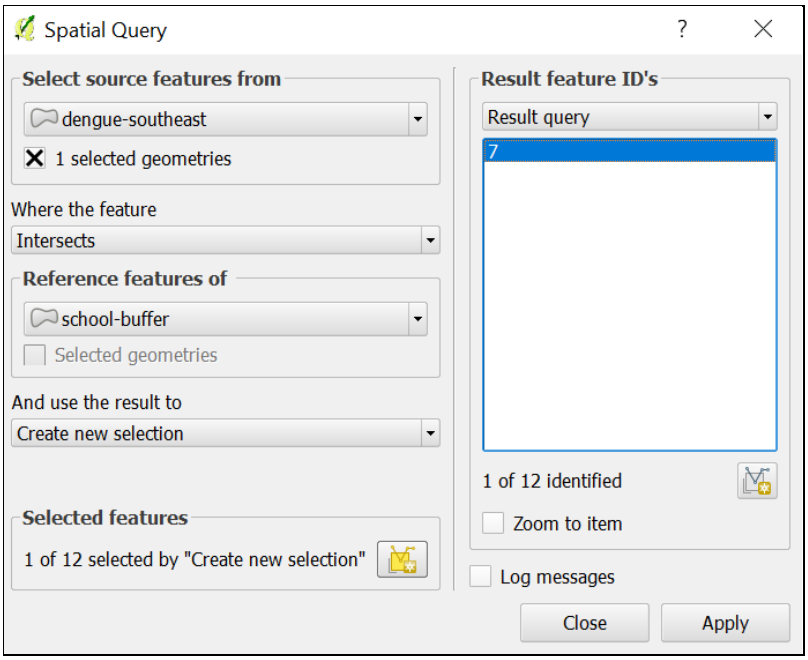
   a. (strpos("Name", ':')+1) returns the position of colon in the content of “Name” field, the +1 is used because the default index starts with 0 but we want to count start from 1, and we want to count/read from the colon but exclude the colon it self.
   b. length("Name") returns the length of the content in “Name field”.
   c. Overall, the total content after the colon is being read, with all leading and trailing whitespace removed.

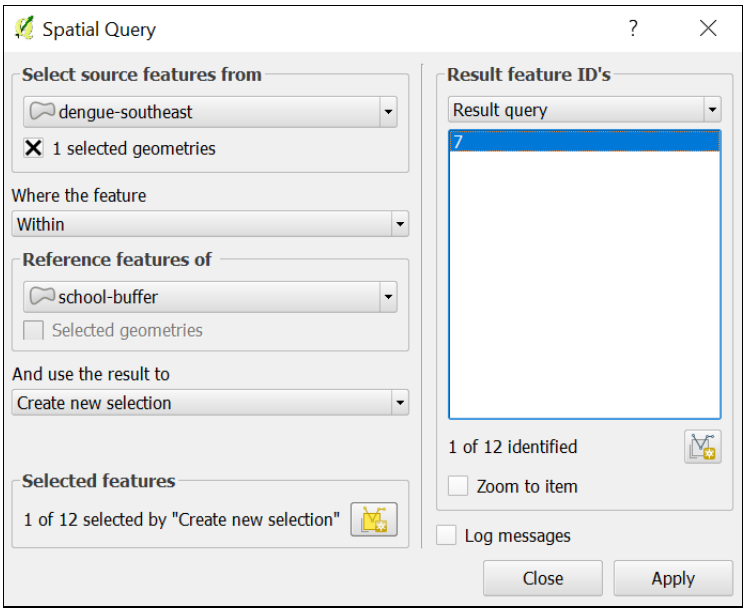
2. **What is the number of dengue cases within 1km from SUTD? What is the total number of cases in the South East region?**

   As seen in the following basic statistics results, the sum of cases is 13, meaning the total number of cases in the South East region is 13.

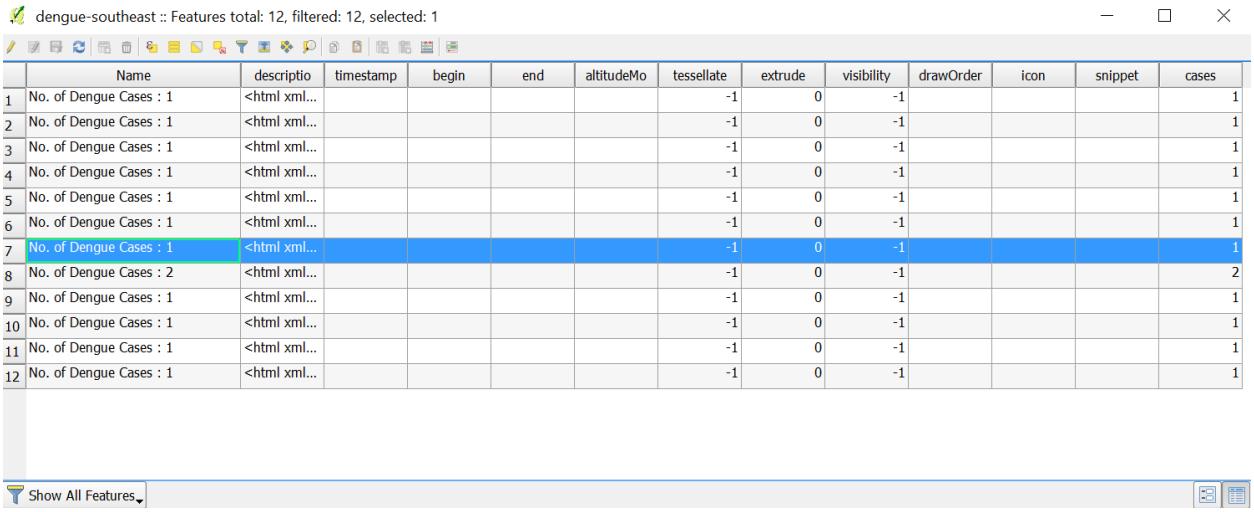



As seen below, when either “intersects” or “within” option is selected for spatial query, the result (number of dengue cases falls within the 1km range from SUTD) is only case with ID number 7.






To check the number of cases in Case#7, cross reference with the attribute table is conducted, and it is shown that the number of cases in case#7 is one. It confirms the observation that only one square falls within the circular boundary.




| | Name | descriptio | timestamp | begin | end | altitudeMo | tessellate | extrude | visibility | drawOrder | icon | snippet | cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 2 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 3 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 4 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 5 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 6 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 7 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 8 | No. of Dengue Cases : 2 | <html xml... | | | | | -1 | 0 | -1 | | | | 2 |
| 9 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 10 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 11 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |
| 12 | No. of Dengue Cases : 1 | <html xml... | | | | | -1 | 0 | -1 | | | | 1 |

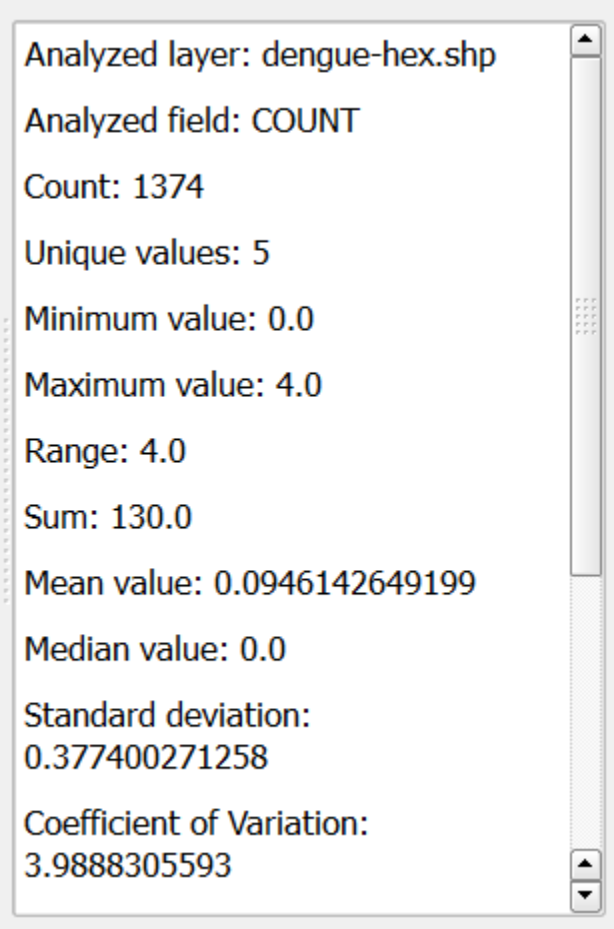
3. **If you had to tell your editor what the main clusters of current dengue cases are, what would they be? Additionally, how many total dengue cases have there been in this period?**

   The main clusters of current dengue cases are as follows (categorised by region):

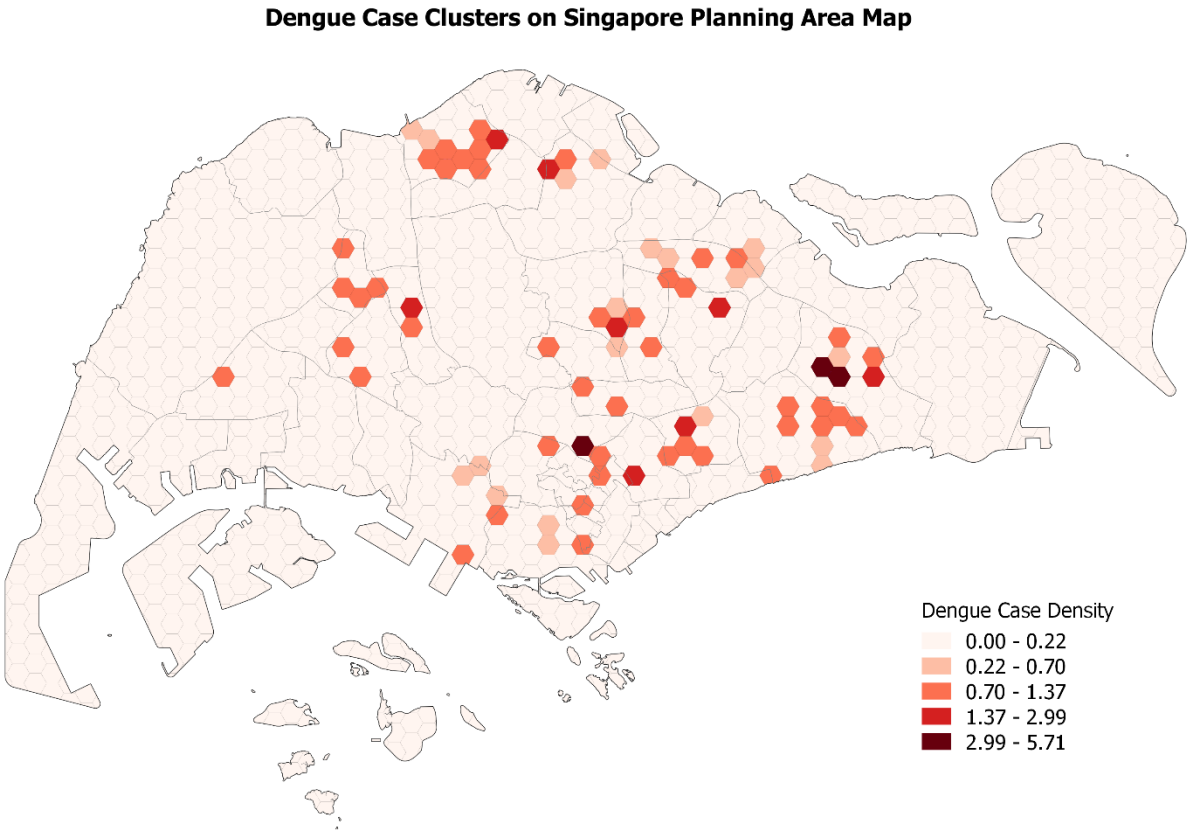
   - South East: Tampines, Bedok, Geylang
   - North East: Sengkang, Ang Mo Kio
   - North: Woodlands, Yishun
   - West: Choa Chu Kang, Bukit Panjang, Bukit Batok
   - Central: Newton, Queenstown, Bukit Merah

   The cluster trend is presented this way with the target audience of the newspaper in mind. For the public, information of planning area is more relatable than absolute location coordinates. Also, the sorting by area makes reading and searching more straight forward.

   In this period, there are 130 dengue cases in total (as shown in the sum field of the figure below).



4. **Embed the final, polished thematic map of dengue cases in Singapore.**




5. **Write down 1-2 paragraphs on your decision whether to send the map based on the geocoded csv on to your editor. If you choose not to send it, detail how you can perhaps still use insights gained from it within a news article.**

I will not send the geocoded csv based map. The reasons are:

a. Data source credibility: compared to the official governmental data, the data from a contact may not have been properly derived with completed and detailed facts. The reported cases may not have been confirmed either. Also, the data lacks credibility and copyright protection.
b. Data precision: Geocoded map data may lose precision due to error in geocoding technique. Compared to governmental data that is categorised into geometry regions, the interpreted geocoded data lacks precision.

c. Data period: The data is collected later/more recent than the data obtained from governmental website, thus the temporal character of the data are not identical, and may confuse readers when combined or presented simultaneously.

Despite not sending the map, the insights gained within it may still be used within a news article by presenting a general description of the data (range of case count within a general region) at the end of the article, with the source of data clearly explained (from unofficial data provided by NEA contact).