**Shapes on a Triangle**

1. Move the right triangle around and show the square. Fill in the table with the areas using the applet.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Shape | Area of Green | Area of Yellow | Area of Purple | Area Green + Area Yellow |
| Square\_1 |  |  |  |  |
| Square\_2 |  |  |  |  |
| Triangle\_1 |  |  |  |  |
| Triangle\_2 |  |  |  |  |
| Semi-circle\_1 |  |  |  |  |
| Semi-circle\_2 |  |  |  |  |

1. Discuss with a classmate any observations or patterns you found in the table and prepare for a class discussion.
2. Make three conjectures, one for each shape, about a relationship between the areas of each shape.
3. Prove one of your conjectures:
4. What relationship did you discover?