**Shape and Space**

**Unit 1 Line Master 7a**

Exploring Relationships in

Right Triangles

**Each person:**

1. Draw a right triangle on 0.5-cm grid paper. Label sides *a*, *b*, and *c*, where *c*   
is the *hypotenuse*, the side opposite the right angle.

2. Measure the length of the hypotenuse. Record the measures of the three side lengths   
in the table below.

3. Draw a square on each side of the triangle. Determine the area of each square   
in square centimetres. Record the measures in the table.

**As a group:**

4. Complete the table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Group member** | **Length, side *a*** | **Length, side *b*** | **Length, side *c*** | **Area,  *a*2** | **Area, *b*2** | **Area,**  ***c*2** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

5. What patterns or relationships do you notice?

**Shape and Space**

**Unit 1 Line Master 7b**

Exploring Relationships in

Right Triangles   
 (Accommodation)

**Each person:**

1. Draw one of the right triangles described in the table on 0.5-cm grid paper.   
Label sides *a*, *b*, and *c*, where *c* is the *hypotenuse*, the side opposite the right angle.

2. On another piece of 0.5 cm grid paper, draw a square with each side length, *a*, *b*, and *c*. Cut out each square and attach them to the sides of the triangle.   
Determine the area of each square. Record the measures in the table.

**As a group:**

3. Complete the table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Group member** | **Length, side *a*** | **Length, side *b*** | **Length, side *c*** | **Area,  *a*2** | **Area, *b*2** | **Area,**  ***c*2** |
| 1 | 6 | 8 | 10 |  |  |  |
| 2 | 5 | 12 | 13 |  |  |  |
| 3 | 1.5 | 2 | 2.5 |  |  |  |
| 4 | 2.5 | 6 | 6.5 |  |  |  |

4. What patterns or relationships do you notice?