Why Do They Tessellate?

**Geometry**

**Unit 1 Line Master 3a**

* What is the sum of the angles in a triangle?
* For each polygon shown, draw diagonals from one vertex
to each of the other vertices.

Square Rectangle

Regular pentagon Regular hexagon

Regular octagon Regular decagon



 Why Do They Tessellate? (cont’d)

**Geometry**

**Unit 1 Line Master 3b**

* Complete the table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Polygon** | **Number of triangles** | **Sum of angle measures**  | **Measure of each angle**  | **360° ÷ angle measure**  |
| rectangle |  |  |  |  |
| square |  |  |  |  |
| regular pentagon |  |  |  |  |
| regular hexagon |  |  |  |  |
| regular octagon |  |  |  |  |
| regular decagon |  |  |  |  |

 Why Do They Tessellate? (cont’d)

**Geometry**

**Unit 1 Line Master 3c**

* Does a regular decagon tessellate?
Justify your answer.
* Explain why some polygons tessellate and other polygons do not.