Name Date

For each of the following sheets, there are polygons inscribed in and circumscribed about a circle with a diameter of 7 inches.

1. Work with a partner. One student should measure a side of the inscribed polygon and use that to calculate its perimeter. Their partner should measure the side of the circumscribed polygon and use that to calculate its perimeter.
2. Then complete the rest of the table by calculating the average of the two perimeters for each shape and recording that in the column for the mean.
3. Finally take the mean and divide it by 7, for the last column.

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| **Polygon** | **Length of one side of the inscribed polygon** | **Perimeter of inscribed polygon** | **Length of one side of the circumscribed polygon** | **Perimeter of circumscribed polygon** | **Mean of the two different perimeters** | **Mean ÷ 7** |
| **Square** |  |  |  |  |  |  |
| **Hexagon** |  |  |  |  |  |  |
| **Octagon** |  |  |  |  |  |  |
| **16 –gon** |  |  |  |  |  |  |