Name:

Date:

School:

Facilitator:

4.01 Explore

**Radian and Degree Measure**

Investigate the trigonometric ratios of general angles in both degree and radian measure.

There is an angle slider located on the x-axis that will allow you to change the measure of the angle. You can also use the right and left arrow keys to move the angle.

Fill in the following table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Angle | Angle in Radians | Angle in π radians | sin Θ | cos Θ | tan Θ |
| 30° | .524 | 1/6 π | .5 | .866 | .5/.866 |
| 45° |  | π |  |  | **/** |
| 60° |  | π |  |  | **/** |
| 90° |  | π |  |  | **/** |
| 120° |  | π |  |  | **/** |
| 135° |  | π |  |  | **/** |
| 150° |  | π |  |  | **/** |
| 180° |  | π |  |  | **/** |
| 210° |  | π |  |  | **/** |
| 225° |  | π |  |  | **/** |
| 240° |  | π |  |  | **/** |
| 270° |  | π |  |  | **/** |
| 300° |  | π |  |  | **/** |
| 315° |  | π |  |  | **/** |
| 330° |  | π |  |  | **/** |
| 360° |  | π |  |  | **/** |

Answer the following questions.

1. In which quadrants are the sine positive?  and

negative?  and

2. In which quadrants are the cosine positive?  and

negative?  and

3. In which quadrants are the tangent positive?  and

negative?  and

4. What happens if you move P clockwise around the circle?