Accel. Geometry Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Arc Length & Sector Area Practice Period \_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **1.** | **2.** | **3.** | **4.** | **5.** | **6.** | **7.** |
| radius | | 4 | 8 | 12 |  |  |  |  |
| central angle | | 30° |  |  | 105° | 80° | 240° | 160° |
| arc length | exact |  | *N/A* |  | 7 π | *N/A* |  | *N/A* |
| approximate (use π ≈ 3.14) |  | 5.02 |  |  | 6.28 |  |  |
| area of sector | exact |  | *N/A* | 48 π |  | *N/A* | 24 π | *N/A* |
| approximate (use π ≈ 3.14) |  |  |  |  |  |  | 12.56 |

|  |  |  |
| --- | --- | --- |
| **1.** | The chain of a bicycle travels along the front and rear sprockets, as shown. The radius of the front sprocket is 3**.**25”, and the radius of the rear sprocket is 1**.**75”. To the nearest quarter‑inch, how long is the chain? |  |
| **2.** | Find the distance around the track if you drive along the inner edge (with the 5‑meter radius), then find the distance around the track if you travel along the outer edge. Give your answer in exact form and as a decimal rounded to the nearest hundredth. |  |
| **3.** | This window is formed by two semicircles. Find the area of the glass in the shaded region. Give your answer in exact form and as a decimal rounded to the nearest hundredth. |  |
| **4.** | Which of the following produces the most pizza area per slice? The most crust per slice?   |  |  |  |  | | --- | --- | --- | --- | |  |  | pizza area | crust | | **a.** | An 8”‑diameter pizza cut into 6 congruent slices |  |  | | **b.** | A 12”‑diameter pizza cut into 8 congruent slices |  |  | | **c.** | A 16”‑diameter pizza cut into 10 congruent slices |  |  | | |