GEOMETRY · CLASSWORK

Solve Problems Involving Circles

SCORE / 25

01 Part A · Practice

Decide whether a problem asks for a length (arc, $2\pi r$) or an area (sector, πr^2), then use the fraction $\frac{\theta}{360}$.

EXAMPLE

A 16-in. pizza is cut into 8 slices. Find the crust length of one slice.

1. Whole crust: $\pi(16) = 16\pi$ in.
2. One slice: $\frac{16\pi}{8} = 2\pi \approx 6.3$ in.

1 ●○○ For a 30° sector of a circle with radius 13, find the arc length and the sector area in terms of π.

2 ●○○ A circle has area 36π cm². Find the length of a 250° arc in terms of π.

3 ●○○ Find the perimeter of a 330° sector of a circle with radius 23 cm. Give the exact answer and the nearest tenth.

4 ●○○ A 70° sector is cut out of a circle with radius 19 in. Find the area of the part that is left, in terms of π.

5 ●○○ Find the perimeter of a 210° sector of a circle with radius 5 cm. Give the exact answer and the nearest tenth.

6 ●○○ A circle has area 676π cm². Find the length of a 40° arc in terms of π.

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Preview - the full worksheet and its answer key are at primeworksheet.com