Match-Up Arc Length and Perimeter in Radians

| | 1 | Find the arc length in cm of a sector with radius 15 cm and angle 1.3 radians. | 2 | Find the arc length in cm of a sector with radius 8 cm and angle $\frac{7\pi}{4}$ | A B | 2.2 |
|--|----|-------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------|--------|------------------------|
| | 3 | Find the radius in cm. | 4 | radians. Find the angle in radians subtended by an arc of | С | $5\pi + 16$ |
| | | 1.8 rad | | length $12\ cm$ when the radius is $7.5\ cm$. | D | $\frac{3\pi}{5}$ |
| | 5 | Find the perimeter in cm of a sector with an angle of 0.85 radians and a radius of $8~\mathrm{cm}$. | 6 | A sector has a perimeter of 44.1 cm. Given that its radius is 10.5 cm, find the angle in radians. | E | 19.5 |
| | | | | | F | 0.9 |
| | 7 | The perimeter of a sector with radius 12 cm is the same as the perimeter of a | 8 | Find the perimeter in cm of a sector with a radius of 5π | G | 12 |
| | | square with area $100\ \mathrm{cm}^2$. Find the angle of the sector in radians. | | $8~{\rm cm}$ and an angle of $\frac{5\pi}{8}$ radians. | н | 14π |
| | 9 | The perimeter of a sector is $(9\pi + 30)$ cm. If the radius is 15 cm, find the angle in radians. | 10 | The perimeter of a rectangle of length 8 cm and width 6.5 cm is half | I | $\frac{55\pi}{6} + 16$ |
| | | | | the perimeter of a sector with radius 20 cm. Find the angle of the sector in radians. | J | 11 |
| | 11 | The perimeter of a sector is 35.75 cm. If the angle at the centre of the sector is 1.25 radians, find its radius in cm. | 12 | Find the perimeter of the shaded shape in cm. | K | $\frac{4}{3}$ |
| | | | | $\frac{5\pi}{12}$ | L | 22.8 |

| 1 | L | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
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