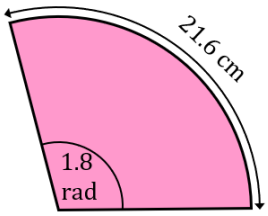
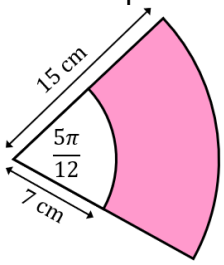
Match-Up — Arc Length and Perimeter in Radians

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 $\frac{7\pi}{4}$ radians.	**A**	1.6
				B	2.2
3	Find the radius in cm. 	**4**	Find the angle in radians subtended by an arc of length $12\ cm$ when the radius is $7.5\ cm$.	**C**	$5\pi + 16$
				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 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 square with area $100\ \text{cm}^2$. Find the angle of the sector in radians.	**8**	Find the perimeter in cm of a sector with a radius of 8 cm and an angle of $\frac{5\pi}{8}$ radians.	**G**	12
				H	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 the perimeter of a sector with radius 20 cm. Find the angle of the sector in radians.	**I**	$\frac{55\pi}{6} + 16$
				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**	$\frac{4}{3}$
				L	22.8

1	2	3	4	5	6	7	8	9	10	11	12
E	H	G	A	L	B	K	C	D	F	J	I