	● Departn Aathem	nent of one	INDIAN SCHOOL AL WADI AL KABIR Department: Mathematics											
	•	🧖 🖉 Class X	Worksheet – Areas related to Circles											
	(MCQ & Assertion - Reason) 0													
	Questions of 1 mark each													
Q.1.	Area of a segment of a circle of radius r and central angle 90° is													
	A	$\frac{\pi r^2}{2} - \frac{1}{2}r^2$	В	$\frac{2\pi r}{4} - \frac{1}{2}r^2$	C	$\frac{\pi r^2}{4} - \frac{1}{2}r^2$	D	$\frac{2\pi r}{2} - r^2 \sin 90^\circ$						
Q.2.	If a bicycle wheel makes 5000 revolutions in moving 11 km, then the diameter of the wheel is													
	Α	65 cm	В	35 cm	С	50 cm	D 70 cm							
Q.3.	The area of a sector of a circle of radius 16 cm cut off by an arc of length 18.5 cm is													
	A 168 cm ²		В	B 148 cm^2 C 154 cm^2		154 cm ²	D	176 cm ²						
Q.4.	The difference of the areas (in cm^2) of two segments of a circle of radius 5 cm, formed by a chord													
	subtending an angle of 90° at the centre is (CFQ)													
	A	$\frac{25\pi}{4}-\frac{25}{2}$	В	$\frac{25\pi}{2} + 25$		$\frac{15\pi}{4}-\frac{7}{2}$	D	$\frac{7\pi}{4} - \frac{3}{2}$						
Q.5.	The hour – hand of a clock is 6 cm long. The angle swept by it between 7:20 am and 7:55 am is													
	A $\left(\frac{35}{2}\right)^{0}$		В	$\left(\frac{35}{4}\right)^0$	С	35°	D	70°						
Q.6.	It is proposed to build a single circular park equal in area to the sum of areas of two circular parks of diameters 16 m and 12 m in a locality. The radius of the new park is													
	A 20 m]		В	15 m		C 10 m		D 24 m						
Q.7.	An The	arc of a circle of le radius of the circ	ength 5π le is	cm and the sector it bou	nds ha	as an area of 20π cr	n ² .							
	Α	1 cm	В	5 cm	С	8 cm	D	10 cm						

Q.8.	Shown below are two pendulums of different lengths attached to a bar.											
	$\frac{3}{4}$ R cm											
	Pendulum 1 Pendulum 2											
	Based on the figure shown above, the length of arc of pendulum 1 is the length of arc											
	of pendulum 2. (CFQ)											
	A	greater than	greater than B less than C equal to		D	cannot say without knowing the value of R						
Q.9.	OACB is a quadrant of a circle with centre O and radius 7 cm where ACB is the arc. Then the perimeter of the quadrant is											
	A	15 cm	В	50 cm	C	25 cm	D	44 cm				
Q.10.	The length of an arc of a circle of radius 18 cm is 10π cm. Then the angle subtended by this arc at the centre of the circle is											
	A	90°	В	120°	C	60 °	D	100°				
Q.11.	Shown below is a semicircular sheet of paper with centre O which is folded in half. (CFQ) A square of length 5 units is cut from it.											
	What is the area of paper left (in sq.units)?											
	A $25 (\pi - 1)$ B $25 (\pi - 2)$ C $25 (2\pi - 2)$ D $25 (\frac{\pi}{2} - 1)$											

If the radii of two concentric circles are 15 m and 13 m, then the area of the circular ring (in sq. m) is																		
А	176	В	178	С	180	D	200											
The area of the circle that can be inscribed in a square of 6cm is																		
А	$36\pi cm^2$	В	$18\pi cm^2$	С	$12\pi cm^2$	D	9πcm ²											
A copper wire when bent in the form of a square encloses an area of 225 cm^2 . If the same wire is bent into the form of a circle, then the area of the circle is (Use $\pi = \frac{22}{7}$)																		
Α	$\frac{900}{\pi}$ cm ²	В	$\frac{\pi}{900}$ cm ²	С	$\frac{700}{\pi}$ cm ²	D	$\frac{\pi}{700} cm^2$											
In figure 'O' is the centre of a circle. If the area of sector OAPB is 10/72 of the area of the circle,																		
find x.																		
$ \begin{array}{c} & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & $																		
А	30°	В	50°	C	40°	D	60°											
The thei	e short and long har r tips in 2 days is	nds of a c	clock are 4cm and 6cm r	respect	tively. The sum of o	dista	nces travelled by (CFQ)											
А	1148 cm	В	1426.35 cm	С	1910.85 cm	D	1248.75 cm											
ASSERTION AND REASONING																		
 DIRECTION: In questions, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of 																		
 (a) Dour resolution (if) and reason (if) are true and reason (if) is the correct explanation of Assertion (A) (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A) (c) Assertion (A) is true but reason (R) is false. 																		
									(d) Assertion (A) is false but reason (R) is true.									
										If the A The Information of the A A A A A A A A A A A A A A A A A A A	If the radii of two condA176The area of the circle toA $36\pi cm^2$ A copper wire when beinto the form of a circleA $\frac{900}{\pi} cm^2$ In figure 'O' is the cendfind x.A 30° The short and long hardtheir tips in 2 days isA1148 cmStatement(a) Both AssertionAssertion (A)(b) Both AssertionAssertion (A)(c) Assertion (A)(d) Assertion (A) is(d) Assertion (A) is	If the radii of two concentric ci A 176 B The area of the circle that can b A $36\pi cm^2$ B A copper wire when bent in the into the form of a circle, then the into the form of a circle, then the A $\frac{900}{\pi} cm^2$ B In figure 'O' is the centre of a con- find x. A 30° B The short and long hands of a con- their tips in 2 days is A 1148 cm B DIRECTION: In questions, a statement of Ref (a) Both Assertion (A) and Assertion (A) (b) Both Assertion (A) and Assertion (A) (c) Assertion (A) is true but (d) Assertion (A) is false but (d) Assertion (A) is false but	If the radii of two concentric circles are 15 m and 13 mA176B178The area of the circle that can be inscribed in a square ofA $36\pi cm^2$ B $18\pi cm^2$ A $copper$ wire when bent in the form of a square enclosint the form of a circle, then the area of the circle is (UA $\frac{900}{\pi} cm^2$ B $\frac{\pi}{900} cm^2$ In figure 'O' is the centre of a circle. If the area of sector find x. $\sqrt{2}$ A 30° B 50° A 30° B 50° The short and long hands of a clock are 4cm and 6cm retheir tips in 2 days isAA1148 cmB1426.35 cmASSERTION AND READIRECTION: In questions, a statement of Assertion (A) and Reason (R) are true and Assertion (A)(b) Both Assertion (A) and Reason (R) are true and Assertion (A)(c) Assertion (A) is false but reason (R) is false.(d) Assertion (A) is false but reason (R) is true.	If the radii of two concentric circles are 15 m and 13 m, then A 176 B 178 C The area of the circle that can be inscribed in a square of 6 cm A $36\pi cm^2$ B $18\pi cm^2$ C A copper wire when bent in the form of a square encloses an into the form of a circle, then the area of the circle is (Use π A $\frac{900}{\pi} cm^2$ B $\frac{\pi}{900} cm^2$ C In figure 'O' is the centre of a circle. If the area of sector OA find x. A 30° B 50° C The short and long hands of a clock are 4cm and 6cm respect their tips in 2 days is A 1148 cm B 1426.35 cm C DIRECTION: In questions, a statement of Assertion (A) is statement of Reason (R). Choose the correct (a) Both Assertion (A) and Reason (R) are true and Reass Assertion (A) (b) Both Assertion (A) is true but reason (R) is false. (d) Assertion (A) is false but reason (R) is true.	If the radii of two concentric circles are 15 m and 13 m, then the area of the circle A 176 B 178 C 180 The area of the circle that can be inscribed in a square of 6cm is A $36\pi cm^2$ B $18\pi cm^2$ C $12\pi cm^2$ A copper wire when bent in the form of a square encloses an area of 225 cm^2 . I into the form of a circle, then the area of the circle is (Use $\pi = \frac{22}{7}$) A $\frac{900}{\pi} cm^2$ B $\frac{\pi}{900} cm^2$ C $\frac{700}{\pi} cm^2$ In figure 'O' is the centre of a circle. If the area of sector OAPB is 10/72 of the find x. A 30° B 50° C 40° The short and long hands of a clock are 4cm and 6cm respectively. The sum of their tips in 2 days is A 1148 m B 1426.35 cm C 1910.85 cm A 1148 cm A 1426.35 cm C 1910.85 cm A 30° A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option (a) Both Assertion (A) and Reason (R) are true and Reason (R) is not the condition (A) is false. (d) Assertion (A) is false but reason (R) is false. (d) Assertion (A) is false but reason (R) is true.	If the radii of two concentric circles are 15 m and 13 m, then the area of the circleA176B178C180DThe area of the circle that can be inscribed in a square of 6cm isA $36\pi cm^2$ B $18\pi cm^2$ C $12\pi cm^2$ DA $36\pi cm^2$ B $18\pi cm^2$ C $12\pi cm^2$ DA $36\pi cm^2$ B $18\pi cm^2$ C $12\pi cm^2$ DA $ooper$ wire when bent in the form of a square encloses an area of $225 cm^2$. If the into the form of a circle, then the area of the circle is (Use $\pi = \frac{27}{7}$)NA $\frac{900}{\pi} cm^2$ B $\frac{\pi}{900} cm^2$ C $\frac{700}{\pi} cm^2$ DIn figure 'O' is the centre of a circle. If the area of sector OAPB is $10/72$ of the area find x. $\sqrt{2}$ $\sqrt{2}$ $\sqrt{2}$ A 30° B 50° C 40° DThe short and long hands of a clock are 4cm and 6cm respectively. The sum of distat their tips in 2 days is $1426.35 cm$ C $1910.85 cm$ DA $1148 cm$ B $1426.35 cm$ C $1910.85 cm$ DA statement of Reason (R). Choose the correct option(a) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct Assertion (A)(b) Both Assertion (A)and Reason (R) are true and Reason (R) is not the correct Assertion (A)(c) Assertion (A) is true but reason (R) is false.(d) Assertion (A) is false but reason (R) is false.		

Q.17.	Assertion: The area of the sector of a circle of radius 14 cm and central angle 90° is 154 cm^2 .												
	Reason: The area of the sector of a circle of radius r and central angle θ is $\pi r^2 \frac{\theta}{360}$.												
Q.18.	8. Assertion: The area of a circular playground is 22176 m^2 and the cost of fencing this ground at the												
		rate of ₹ 50 per metre is ₹ 26400											
	Reason:	If R and r be the radii of outer and inner circular path, then the area of the ring is											
		$\pi(R^2-r^2)$											
Q.19.	• Assertion: The diameter of a circle whose area is equal to the sum of the areas of the two circles of												
		radii 24 cm and 7 cm is 50 cm.											
	Reason:	son: If the perimeter and the area of a circle are numerically equal, then the radius of the circle											
		is 2 units.											
Q.20.	1.20. Assertion: If a wire of length 22 cm is bent in the shape of a circle, then area of the circle so formed												
	is 40 cm^2 .												
	Keason:	Circuintere		Leng									
AINDWEKD													
Q.1	C	Q.2	D	Q.3	В	Q.4	В	Q.5	А				
Q.6	С	Q.7	С	Q.8	В	Q.9	С	Q.10	D				
Q.11	В	Q.12	Α	Q.13	D	Q.14	A	Q.15	В				
Q.16	С	Q.17	а	Q.18	b	Q.19	b	Q.20	d				
