Answers and mark guide

Q	Answer	Working	Marks
1	**151 cm²**	120/360 × π × 12²	3
2	**6.28 cm**	90/360 × 2π × 4	3
3	**21.2 cm²**	30/360 × π × 9²	3
4	**20.9 cm**	150/360 × 2π × 8	3
5	**115 cm²**	270/360 × π × 7²	3
6	**39.3 cm**	Arc + 2 radii	4
7	**12.25π cm²**	¼ × π × 7²	3
8	**120°**	angle = arc ÷ (2π r) × 360	4
9	**Area 50π cm²; perimeter (10π + 20) cm**	½πr² and πr + 2r	4
10	**1/5**	72/360	3
11	**9 cm (3 s.f. accuracy)**	r² = area ÷ (π × 72/360)	5
12	**72°**	arc ÷ (2πr) × 360	5
13	**88.4 cm²**	πr² ÷ 8	4
14	**20.9 cm**	20 minutes is 1/3 of a circle	4
15	**6.28 cm**	It equals the arc length.	5
16	**90°**	Arc = perimeter − 2r	5
17	**Shown**	Use A = (θ/360) × πr²	4
18	**21.5 cm²**	10² − ¼π10²	5
19	**8.38 cm²**	1/6 × π × 4²	3
20	**63.4 cm²**	1/6 × π × 11²	3

My score: _____ / 76 Questions 1–15 = 56 marks (Foundation focus)