Answers and mark guide

Q	Answer	Working	Marks
1	**12.0 cm**	√(8² + 9²)	3
2	**11.0 cm**	√(6² + 6² + 7²)	4
3	**13.0 cm**	√(9 + 16 + 144)	4
4	**4√3 cm**	√(3 × 4²)	3
5	**11.0 m**	√(6² + 6² + 7²)	4
6	**37.6°**	tan x = 10 ÷ 13.0	5
7	**45.0°**	tan x = 6/6	4
8	**31.0°**	cos x = 12 ÷ 14.0	5
9	**67.4°**	tan x = h ÷ base diagonal	5
10	**22.6°**	cos x = edge ÷ diagonal	5
11	**6.56 cm**	Half the base diagonal, then Pythagoras	5
12	**40.3°**	tan x = height ÷ half the diagonal	5
13	**6.78 cm**	Pythagoras with half the diagonal	5
14	**5.83 cm**	Half the base side	5
15	**167 cm³**	⅓ × base × height	3
16	**45.0°**	Angle between a line and a plane	6
17	**√(l² + w² + h²) = ladder length**	Space diagonal	5
18	**14.1**	Space diagonal	4
19	**Base diagonal² = a² + b², then diagonal² = base diagonal² + c²**	Use Pythagoras twice.	5
20	**Base diagonal = s√2; height = s; tan x = s/(s√2) = 1/√2**	Use a cube of side s.	6

My score: _____ / 91 Questions 1–15 = 65 marks (Foundation focus)