BLM 7 – *Circle Unit Answer Key*

Kekuli Measurement	12 post Option
Radius (using Pythagoras)	3 m
Diameter (r x 2)	6 m
Distance to P from Centre (given):	6 m
Length of entrance opening from circumference:	1.52 m
Width of entrance at opening:	1.60 m
Radius of fire circle:	Varies by student choice. Should be between 1-2.0 meters for optimal measuring ease of math.
Radius of smoke hole:	Varies by student choice, but is 2/3 of diameter of smoke hole • (i.e., 1 m diameter fire circle: 0.667 m smoke hole) • (i.e., 1.5 m diameter fire circle: 1 m smoke hole) • (i.e., 2.0 m diameter fire circle: 1.333 m smoke hole)
Depth of seats on circumference (chord theory, Pythagoras, subtract from radius):	0.86 m
Central angle at entrance beams:	30°
Inscribed angle:	15°
Height of central support beams:	Varies by student choice; but use Chord theory and Pythagoras (i.e., 1 m diameter fire circle: 2.95 m tall support beams; 1.5 m diameter fire circle: 2.90 m tall support beams; i.e., 2.0 m diameter fire circle: 2.83 m tall support beams)
Height of ceiling 2m from centre:	2.24 m
Height of entrance:	Varies by student choice. • If entrance is at 2.75 m, height = 1.20 m • If entrance is at 2.60 m, height = 1.50 m • If entrance is at 2.50 m, height = 1.66 m