IM2 Book 2 Selected Answers

John Spence

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177. $-$

178. Minor arc length $= 11.07$; major arc length $= 20.34$; $A_1 = 17.68$; $A_2 = 60.86$

179. $\frac{2\pi r^3}{3}$

180. (a) $39\pi \ cm^2$

    (b) $39\pi \ cm^2$

181. $-$

182. $V_1 = \frac{1280\pi}{3} - 320\sqrt{3}, \ V_2 = \frac{2560\pi}{3} + 320\sqrt{3}$

183. $15, \sqrt{505}$

184. $L = 16, A_1 = 48, A_2 = 120$

185. $-$

186. tangent line: $y - 12 = \frac{1}{8}(x - 6)$

187. $2\pi - 4$

188. (a) $16\pi h - h^2\pi$

    (b) $16\pi h - h^2\pi$

    (c) $-$

    (d) $-$

    (e) $\frac{1024\pi}{3}$

    (f) $\frac{2048\pi}{3}$

189. $\sqrt{r^2 - d^2}$