

Name: _____

Calculus

Answers to Your Try Problems for Chapter 4

Worked Example 1) minimum distance is $\frac{\sqrt{5}}{5}$

4a) Vertex $\left(\frac{5}{6}, \frac{871}{108}\right)$

4b) Maximum $(0, 2)$

Minimums $(-\sqrt{2}, -2)$ and $(\sqrt{2}, -2)$

Points of inflection $\left(\frac{-2\sqrt{3}}{3}, \frac{-2}{9}\right)$ and $\left(\frac{-2\sqrt{3}}{3}, \frac{-2}{9}\right)$

4d) Position $x=0.588$; velocity $v=-2.542$; acceleration $a=-5.801$.

4e) Maximum at $(-1, 1)$

Points of inflection at $\left(-\frac{3}{2}, 0.607\right)$ and $\left(-\frac{1}{2}, 0.607\right)$

4f) Sell 24,286 widgets at \$8.50 per each.

4g) Dimensions of box = 17.1cm x 17.1cm x 34.2cm.