

2.69
.2

$$y' = 6x^2 + 10x - 4$$

$$y'' = 12x + 10$$

$$\text{max } (-2, 13)$$

$$\text{min } \left(\frac{1}{3}, \frac{8}{27}\right)$$

$$0 = 2(3x^2 + 5x - 2)$$

$$x = -2 \quad \text{max} \leftarrow y''(-2) < 0$$

$$x = \frac{1}{3} \quad \text{min} \leftarrow y''\left(\frac{1}{3}\right) > 0$$

$$(-1, 8)$$

$$\left(\frac{3}{2}, 13\right)$$

$$a_1 = 13$$

$$a_4 = 13 \cdot \frac{8}{27} = \frac{104}{27}$$

$$g^3 = \frac{a_4}{a_1} = \frac{104}{27 \cdot 13} = \frac{8}{27} \rightarrow \sqrt[3]{\frac{8}{27}} = \frac{2}{3}$$

$$S = \frac{13}{1 - \frac{2}{3}} = 39$$