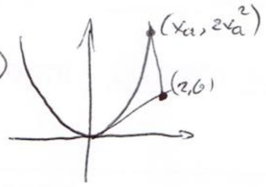
2.55
34 (I)



$$4x_a = \frac{6-2x_a^2}{2-x_a}$$

נשווה שיפועים!

$$8x_a - 4x_a^2 = 6 - 2x_a^2$$

$$2x_a^2 - 8x_a + 6 = 0$$

$$x_a = 3 \quad x_a = 1$$

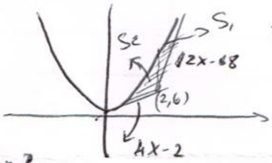
משוואות המשיקים:

$y = 4x-2$ $\quad m = 4 \quad (1,2) \leftarrow x_a = 1$

$y = 12x-18$ $\quad m = 12 \quad (3,18) \leftarrow x_a = 3$

$$S_1 = \int_2^3 (2x^2 - 12x + 18)\,dx = \frac{2x^3}{3} - 6x^2 + 18x \Big|_2^3 =$$

$$(18 - 54 + 54) - \left(\frac{16}{3} - 24 + 36\right) = \frac{2}{3}$$



סרטוט מדויק יותר

$$S_2 = \int_1^2 (2x^2 - 4x + 2)\,dx = \frac{2x^3}{3} - 2x^2 + 2x \Big|_1^2 = \left(\frac{16}{3} - 8 + 4\right) - \left(\frac{2}{3} - 2 + 2\right) = \frac{2}{3}$$

$$S_1 + S_2 = \frac{2}{3} + \frac{2}{3} = \frac{4}{3}$$

2.55
34 (II)

$$\pi \int_1^2 \left[(2x^2) - (4x-2)^2\right] dx + \pi \int_2^3 \left[(2x^2)^2 - (12x-18)^2\right] dx$$