

$$\textcircled{2} \log_{0.5} (4^{x^2-x} + 2^{2x+4}) \leq \log_{0.5} (10 \cdot 2^x)$$

$$4^{x^2-x} + 2^{2x+4} \geq 10 \cdot 2^x$$

$$2^{2x^2-2x} + 2^{2x+4} \geq 5 \cdot 2^{x^2+1} / : 2^{x^2+1}$$

$$\frac{2^{2x^2}}{2^{2x}} + 16 \cdot 2^{2x} \geq 10 \cdot 2^{x^2}$$

$$2^{2x^2-2x} + 16 \cdot 2^{4x} \geq 10 \cdot 2^{x^2+2x}$$

$$A^2 + 16B^2 \geq 10AB$$

$$A^2 - 10AB + 16B^2 \geq 0$$

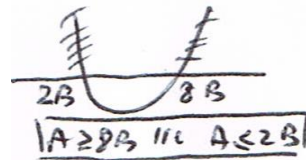
$$A = 2^{x^2}$$

$$B = 2^{2x}$$

(10)

הצבה  
 $x \in 4^{x^2-x} + 2^{2x+4} > 0$   
 $x \in 10 \cdot 2^x > 0$

$$(A-8B)(A-2B) \geq 0$$



$$\boxed{x \geq 3 \vee x \leq -1}$$

$$2^{x^2} \geq 8 \cdot 2^{2x}$$

$$x^2 \geq 3 + 2x$$

$$x^2 - 2x - 3 \geq 0$$

$$\boxed{1 - \sqrt{2} \leq x \leq 1 + \sqrt{2}}$$

$$2^{x^2} \leq 2 \cdot 2^{2x}$$

$$x^2 \leq 1 + 2x$$

$$x^2 - 2x - 1 \leq 0$$

לסיכום:  $x \geq 3, 1 - \sqrt{2} \leq x \leq 1 + \sqrt{2}, x \leq -1$