

2.61
1/5

$$4 \ln x \times 6y^3 x + 36y x \geq 6 \ln x + 2y^4 x$$
$$2y^3 x (2 \ln x - 6y x) \Rightarrow 3(6y x + 2 \ln x) \geq 0$$
$$(2y^3 x - 3) (2 \ln x - 6y x) \geq 0$$

if $3 \ln x$

$$2 \ln x = 6y x /: 6y x \neq 0$$
$$\ln x = \frac{1}{2}$$

$$x = \arctan \frac{1}{2} + \pi k$$

$$-\pi + \arctan \frac{1}{2} \quad \arctan \frac{1}{2} \quad \arctan \frac{1}{2} + \pi$$

$$-\pi + \arctan \frac{1}{2} + 2\pi k < x <$$

$$\arctan \frac{1}{2} + 2\pi k$$