

Answer on Question #47067 - Math - Algebra

$$(0.25)^5 = (4^{(5x-3/3)})(0.125)^{6x}.$$

Solution.

$$0.25 = \frac{1}{4} = \frac{1}{2^2} = 2^{-2},$$

$$4 = 2^2,$$

$$0.125 = \frac{1}{8} = 2^{-3}.$$

Rewrite initial equation as follows:

$$(2^{-2})^5 = (2^2)^{5x-1} * (2^{-3})^{6x};$$

$$2^{-10} = 2^{10x-2} * 2^{-18x};$$

$$2^{-10} = 2^{-8x-2};$$

$$-10 = -8x - 2;$$

$$8x = 8;$$

$$x = 1.$$

Answer: 1.