

4.14  
13

$x \neq 0$

$$3 \cdot 2^{-\frac{2}{x}} + 2 \cdot 9^{-\frac{1}{x}} = 5 \cdot 6^{-\frac{1}{x}}$$

$$3 \cdot (2^{-\frac{1}{x}})^2 + 2 \cdot (3^{-\frac{1}{x}})^2 = 5 \cdot (2 \cdot 3)^{-\frac{1}{x}}$$

$$3^{-\frac{1}{x}} = B \quad 2^{-\frac{1}{x}} = A$$

1/11/11

$$3A^2 - 5AB + 2B^2 = 0$$

$$A = B$$

$$A = \frac{2}{3}B$$

$$2^{-\frac{1}{x}} = 3^{-\frac{1}{x}}$$

$$2^{-\frac{1}{x}} = \frac{2}{3} \cdot 3^{-\frac{1}{x}}$$

$$\left(\frac{2}{3}\right)^{-\frac{1}{x}} = 1 = \left(\frac{2}{3}\right)^0$$

$$3^{-1-\frac{1}{x}} = 2^{-1-\frac{1}{x}}$$

∅

$$-1 - \frac{1}{x} = 0$$

$$\boxed{x = -1}$$