

Pre-Calculus

KEY

Rewrite an exponential function with positive exponents.

1. $y = \frac{1}{3^{2x}}$

2. $y = \frac{5^2}{5^x}$

3. $y = 4^x$

4. $y = \frac{3 \cdot 7^x}{7^5}$

5. $y = \left(\frac{3}{2}\right)^x = \frac{3^x}{2^x}$

6. $y = \left(\frac{4}{7}\right)^9 \cdot \left(\frac{7}{4}\right)^x = \frac{4^9 \cdot 7^x}{7^9 \cdot 4^x}$

7. $y = 4^x 5^x = (4 \cdot 5)^x = 20^x$

8. $y = 3^{2x} 2^x = (3^2)^x \cdot 2^x = 9^x \cdot 2^x = 18^x$

9. $y = \frac{6^{-9x}}{2^{12x}} = \frac{1}{2^{12x} \cdot 6^{9x}} = \frac{1}{2^{12x} \cdot 2^{9x} \cdot 3^{9x}} = \frac{1}{2^{21x} \cdot 3^{9x}}$

10. $y = \frac{4^{-5x}}{3^{-10x}} = \frac{3^{10x}}{4^{5x}} = \frac{3^{10x}}{2^{10x}} = \left(\frac{3}{2}\right)^{10x}$