

Review: 10.1 – 10.3

Board Races!!!!

No calculators!!!!

Simplify each expression completely.

$$(\sqrt{3})\left(15^{\frac{1}{2}}\right)$$

$$4^{\frac{5}{2}} * 9^{-\frac{1}{2}}$$

$$\left(2^{\frac{2}{3}}\right)^6$$

$$36^{-\frac{1}{2}} - 64^{-\frac{1}{3}}$$

$$\left(7^{\frac{1}{2}} + 5^{\frac{1}{2}}\right)\left(7^{\frac{1}{2}} - 5^{\frac{1}{2}}\right)$$

$$16^{0.25}$$

$$25^{-1.5}$$

$$7^{1.6} * 49^{0.2}$$

Write in exponential form.

$$\sqrt[6]{64x^{12}y^8}$$

Write in exponential form.

$$\sqrt[3]{x^2} * \sqrt[4]{x}$$

Solve each of the following equations.

$$4^{x^2} = 16$$

$$27^x = \frac{1}{9}$$

$$5^x = 1$$

$$x^{\frac{3}{4}} = 8$$

$$x^{\frac{4}{3}} = 625$$

$$\left(\frac{4}{9}\right)^{4x} = \frac{27}{8}$$

Let $f(x) = 2x + 4$ and $g(x) = \sqrt{x^2 - 4}$.
Find $f(g(2))$.

Let $f(x) = 2x + 4$ and $g(x) = \sqrt{x^2 - 4}$.
Find $g(f(0))$.

Let $f(x) = 2x + 4$ and $g(x) = \sqrt{x^2 - 4}$.
Find $f(f(-2))$.

Let $f(x) = 2x + 4$ and $g(x) = \sqrt{x^2 - 4}$.
Find x so that $f(x) = 12$.

Let $f(x) = 2x + 4$ and $g(x) = \sqrt{x^2 - 4}$.
Find $f^{-1}(x)$.

If $(2, 4)$ is on the graph of $y = f(x)$, what point is on the graph of the inverse of f ?