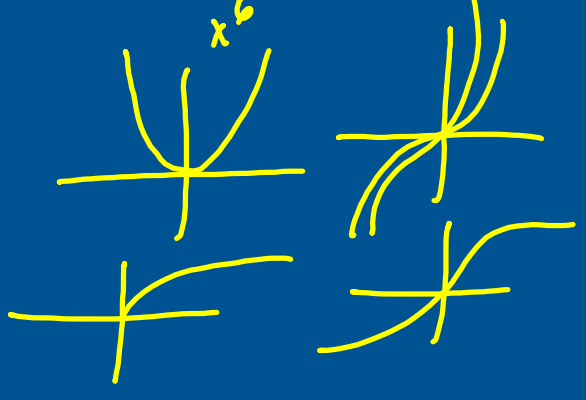
Power Regression

$y = a x^b$

$y = 2x^2$ x^4 x^6

$y = 2x^3$ x^5



Exponents + Roots Review

Inverse Functions

#42-44
Find eq. of f^{-1}.

1) Switch x's & y's
2) Solve for y.

$f(x) = \sqrt{4x-3} + 2$

$x = \sqrt{4y-3} + 2$

$(x-2)^2 = \left(\sqrt{4y-3}\right)^2$

$(x-2)(x-2) = 4y-3$

$x^2 - 4x + 4 = 4y - 3$
$+3 \quad +3$

$\frac{x^2-4x+7}{4} = \frac{4y}{4}$

$\frac{x^2-4x+7}{4} = f^{-1}$

Are f & g inverses?

$f(x) = \frac{x^2-3}{7}$ $g(x) = \sqrt{7x+3}$

f∘g or g∘f = x

$f \circ g = \frac{\left(\sqrt{7x+3}\right)^2 - 3}{7}$

$= \frac{7x+3-3}{7}$

$= x$

yes

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Exponent Rules (1-8)

Like #2

$$\frac{8^{7} \cdot 8^{-5}}{8^{8}} = \frac{8^{2}}{8^{8-2}} = \frac{1}{8^{6}} = \frac{1}{\text{big \#}}$$

$$\frac{8^{8-2}}{8^{2}}$$

$$4(ab)^{0}$$

$$= 4 \cdot 1$$

$$= 4$$

Scientific Notation

No graphing calc.

Like 10

$$\frac{4.8 \times 10^{2}}{(1.6 \times 10^{8})(2.4 \times 10^{-3})}$$

$1.6x^{8} \cdot 2.4x^{-3}$

$$\frac{4.8 \times 10^{2-5}}{3.84 \times 10^{5}}$$

1.25×10^{-3}

$12.5 \times 10^{-3+1}$

1.25×10^{-2}

14 $\sqrt[4]{48b^6r^7t^{10}} \cdot \sqrt[4]{8b^2r^2t^4}$ (even)

$= \sqrt[4]{48b^8r^9t^{14}}$

$48 = 16 \cdot 3$

$= 2b^2r^2t^3\sqrt[4]{3rt^2}$

x^4
1
16
81
⋮

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