

Review Inverses Key

1 $x = 4y - 1$
 $x + 1 = 4y$
 $\frac{x+1}{4} = y$

Find the Inverse
 $y = 4x - 1$

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2 $x = (y+6)^3$
 $\sqrt[3]{x} = y+6$
 $\sqrt[3]{x} - 6 = y$

Find the Inverse
 $y = (x+6)^3$

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3 $x = 5y^2 - 2$
 $x + 2 = 5y^2$
 $\sqrt{\frac{x+2}{5}} = y$

Find the Inverse
 $y = 5x^2 - 2$

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4 $x = \sqrt[3]{y+4}$
 $x^3 = y+4$
 $x^3 - 4 = y$

Find the Inverse
 $y = \sqrt[3]{x+4}$

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5 $a = 1$
 $b = 3$
 $c = 7$
 $3 \pm \sqrt{9 - 4(1)(7)}$
 $z = \frac{3 \pm \sqrt{19}}{2}$

Solve for all roots:
 $x^3 - 5x^2 + 13x - 14 = 0$
 $1 \quad -5 \quad 13 \quad -14$
 $z \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$
 $1 \quad -3 \quad 7 \quad 0$
 $x^2 - 3x + 7$

on calc. $\rightarrow z$

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7 $x = \frac{z}{y} - 1$
 $x + 1 = \frac{z}{y}$ mult. by y
 $y(x+1) = z$
 $y = \frac{z}{x+1}$

Find the Inverse $x+1$
 $y = \frac{2}{x} - 1$

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6 $x = 5\sqrt{y+z}$
 $\frac{x}{5} = \sqrt{y+z}$
 $\frac{x^2}{25} - z = y$

Find the Inverse
 $y = 5\sqrt{x+2}$

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8 $-3(-\frac{1}{3}x + \frac{2}{3}) + 2$
 $x - 2 + 2$
 $= x$
 $-\frac{1}{3}(-3x+2) + \frac{2}{3}$
 $x - \frac{2}{3} + \frac{2}{3} = x$

Are these inverses of each other?
 $f(x) = -3x + 2$
 $g(x) = -\frac{1}{3}x + \frac{2}{3}$

Yes

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* or find inverse of each and see if they are inverses of each other.

$$y = 4x - 3$$

Find the inverse

$$x + 3 = y$$

$$x + 3 = 4y$$

$$x = 4y - 3$$



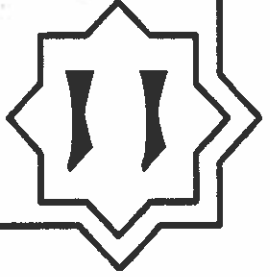
Simplify:

a) $(3-5!)(-4+2!)$
 $-12 + 6! + 20! + 10!$

b) $(5x+3) - (2x-3)$
 $5x+3-2x+3$

b) distribute!
 $3x + 6$

a) $6! - 2 + 26!$



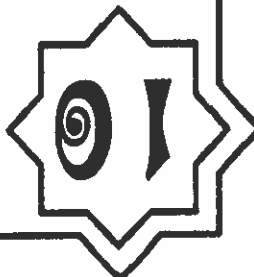
$$y = \frac{7x + 18}{2}$$

Find the inverse

$$2x - 18 = y$$

$$2x = 7y + 18$$

$$x = \frac{7y + 18}{2}$$



a) $\log x + \log 3 = 2$
 Condense $\log_3 3x = 2$
 Around world $\log_3 \frac{x}{2x+5} = 4$

Solve: $x = \frac{5}{79}$

$$8|x = 2x + 5$$

b) $3^4 = 2x + 5$

$$x = \frac{100}{3}$$

$$\frac{100}{3} = 3x$$

a) $10^2 = 3x$

