$\sqrt[4]{7x-10} = (7x-10)^{\frac{1}{4}}$

Bell Work:

Solve.

$4\sqrt[4]{7x-10} + 12 = 32$

$4\sqrt[4]{7x-10} = 20$

$\sqrt[4]{7x-10} = 5$

$7x-10 = 5^4$

$7x-10 = 625$

$7x = 635$

$x = 635/7$

Solve

1) $3+(4-x)^{\frac{3}{2}}=11$

$(4-x)^{\frac{3}{2}}=8$

$4-x=8^{\frac{2}{3}}$

$4-x=(\sqrt[3]{8})^2$

$4-x=4$

$-x=0$

$x=0$

(2) $3(x+3)^{\frac{3}{4}}=81$

$(x+3)^{\frac{3}{4}}=27$

$x+3=27^{\frac{4}{3}}$

$x+3=(\sqrt[3]{27})^4$

$x+3=81$

$x=78$

3) $(x+5)^{\frac{2}{3}} = 4$

$x+5 = 4^{3/2}$

$x+5 = (\sqrt{4})^3$

$x+5 = (\pm 2)^3$

$x+5 = \pm 8$

$x+5 = 8$ $\quad$ $x+5 = -8$

$x = 3$ $\quad$ $x = -13$

$(3+5)^{2/3} = 4$

$(8)^{2/3} = 4$

$(\sqrt[3]{8})^2 = 4$

$(2)^2 = 4$

$(-13+5)^{2/3} = 4$

$(-8)^{2/3} = 4$

$(\sqrt[3]{-8})^2 = 4$

$(-2)^2 = 4$

*If the numerator of exponent is even, then create an absolute value equation after moving the exponent and simplifying.