Solve.

$$2\sqrt[3]{4x-7}+3=15$$

$$-3 \quad -3$$

$$\frac{2\sqrt[3]{4x-7}}{2}=\frac{12}{2}$$

$$\left(\sqrt[3]{4x-7}\right)^3=(6)^3$$

$$4x-7=216$$

$$+7 \quad +7$$

$$\frac{4x}{4}=\frac{223}{4}$$

$$x=55.75$$

Solve.

$$(3x+13)^{\frac{1}{2}}=(x-1)^{\frac{1}{2}}$$

$$\left(\sqrt{3x+13}\right)^2=\left(\sqrt{x-1}\right)^2$$

$$3x+13=x-1$$

$$-x \quad -13 \quad -x \quad -13$$

$$\frac{2x}{2}=\frac{-14}{2}$$

$$x=-7$$

Solve.

$$\frac{\sqrt{x+6}}{5}=\frac{5\sqrt{x-12}}{5}$$

$$\left(\frac{\sqrt{x+6}}{5}\right)^2=\left(\sqrt{x-12}\right)^2$$

$$25\cdot\frac{x+6}{25}=(x-12)25$$

$$x+6=25x-300$$

$$-x+300 \quad -x \quad +300$$

$$\frac{306}{24}=\frac{24x}{24}$$

$$x=12.75$$

You can now finish Hwk #8

Sec 7-5

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Problems 6, 7, 9 ,16-18, 23

Solve.

$$\left[(x+2)^{\frac{1}{2}}\right]^2 = \left[6(x-3)^{-\frac{1}{2}}\right]^2$$

$$x+2 = 36(x-3)^{-1}$$

$$\frac{x+2}{1} = \frac{36}{x-3}$$

$$(x+2)(x-3) = 36$$

$$x^2 - x - 6 = 36$$

$$x^2 - x - 42 = 0$$

$$(x-7)(x+6) = 0$$

$$x = 7, \cancel{-6}$$

-42, -7, $+6$, -1

$x = 7$

Solve.

$$(x+13)^{\frac{1}{4}} - (x+1)^{\frac{1}{2}} = 0$$

$+(x+1)^{1/2}$ $\quad$ $+(x+1)^{1/2}$

$$\left[(x+13)^{\frac{1}{4}}\right]^4 = \left[(x+1)^{\frac{1}{2}}\right]^4$$

$$x+13 = (x+1)^2$$

$$x+13 = x^2+2x+1$$

$$0 = x^2+x-12$$

$$0 = (x+4)(x-3)$$

$$x = \cancel{-4}, 3$$

$x = 3$

Solve.

$$\left[(x-2)^{\frac{4}{3}}\right]^6 = \left[(7)^{\frac{5}{6}}\right]^6$$

$$\sqrt[8]{(x-2)^8} = \sqrt[8]{7^5}$$

$$x-2 = \sqrt[8]{7^5}$$

$+2$ $\quad$ $+2$

$$x = \sqrt[8]{7^5} + 2 \approx 5.37$$