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Tuesday, November 24, 2015 8:55 AM

b. $(3x+1)(x-6)=22$

$3x^2-18x+x-6=22$

$3x^2-17x-6-22=0$

$3x^2-17x-28=0$ $\quad ac=-84$

$3x^2-21x+4x-28=0$

$3x(x-7)+4(x-7)=0$

$(x-7)(3x+4)=0$

$x-7=0$

$x=7$ ✓

$3x+4=0$

$x=-\frac{4}{3}$ ✓ yes both are solutions.

check

$(3\cdot7+1)(7-6)=22$

$21+1=22$

$22=22$ ✓

$\left(3\left(-\frac{4}{3}\right)+1\right)\left(\left(-\frac{4}{3}\right)-6\right)=22$

$-3\left(\frac{-4}{3}-\frac{18}{3}\right)=22$

$-3\left(-\frac{22}{3}\right)=22$ ✓

c. $3x^2+75=-30x$ you try

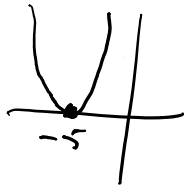
$3x^2+30x+75=0$

$3(x^2+10x+25)=0$

$3(x+5)^2$

$x+5=0$

$x=-5$



check

$3(-5)^2+75=-30(-5)$

$75+75=150$

$150=150$ ✓

d. $5x^2=-20x$ you try

$5x^2+20x=0$

$(5x)(x+4)=0$

$5x=0$

$x=0$

$x+4=0$

$x=-4$

check

$5(0)^2=-20(0)$

$0=0$ ✓

$5(-4)^2=-20(-4)$

$80=80$ ✓