Solve each equation by factoring.

April 5

1) $x^2 - 64 = 0$

$(x+8)(x-8) = 0$

$-8 \quad -8 \qquad +8 \quad +8$

either $x+8=0$ or $x-8=0$

$x = -8$ $\quad x = 8$

Solution Set $\{-8, 8\}$

Solve each equation by factoring.

+4x +4x

2) $x^2 + 3 = -4x$

x (3)

+ (4)

$x^2+4x+3=0$

$(x+1)(x+3)=0$

1, 3

either $x+1$ or $x+3=0$

$x=-1$ $x=-3$

SS {-1, -3}

Solve each equation by factoring.

3) $4n^2 = 12 - 8n$

$\frac{4n^2}{4} + \frac{8n}{4} - \frac{12}{4} = 0$

$4(n^2 + 2n - 3) = 0$

$4(n-1)(n+3) = 0$

either $n - 1 = 0$ or $n + 3 = 0$

$n = 1$ $\quad n = -3$

$X(-3)$
$+(2)$
$-1, 3$

$\{1, -3\}$

Solve each equation by factoring.

4) $4m^2 + 196 = -56m$

$\frac{4m^2}{4} + \frac{196}{4} + \frac{56m}{4} = 0$

$4(m^2 + 49 + 14m) = 0$

$4(m^2 + 14m + 49) = 0$

$4(m+7)(m+7) = 0$

either $m+7=0$ or $m+7=0$

$m = -7$

$\times \begin{matrix} 49 \\ +14 \end{matrix}$

7, 7

$\{-7\}$

Solve each equation by factoring.

5) $p^2 - 35 = -2p$