Solve each equation by factoring. BE SURE TO SET = 0 FIRST! ZPP

11) $x^2 = 16 - 6x$

$+6x \quad -16 \quad +16 \quad +6x$

$x^2 + 6x - 16 = 0$

$(x-2)(x+8) = 0$ ZPP

$x - 2 = 0$ $\quad x + 8 = 0$

$+2 \quad +2 \quad -8 \quad -8$

$x = 2$ $\quad x = -8$

	x	$+8$
x	x^2	$8x$
-2	$-2x$	-16

$= 6x$

12) $x^2 = 3 - 2x$

$-3 \quad +2x \quad -3 \quad +2x$

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

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

$x - 1 = 0$ $\quad x + 3 = 0$

$x = 1$ $\quad x = -3$

	x	3
x	x^2	$3x$
-1	$-1x$	-3

$= 2x$

13) $n^2 = 8n - 7$

$-8n+7 \quad -8n+7$

$n^2 - 8n + 7 = 0$

$(n-1)(n-7) = 0$

$n = 1$ $\quad n = 7$

	n	-1
n	n^2	$-1n$
-7	$-7n$	7

$= -8n$

14) $n^2 - 4 = -3n$

$+3n \quad +3n$

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

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

$n = -4$ $\quad n = 1$

	n	-1
n	n^2	$-1n$
4	$4n$	-4

$= 3n$

"Aussie" method use ZPP!

Solve each equation by factoring.

15) $35r^2 + 9r - 56 = 0$

16) $\frac{2n^2}{2} - \frac{7n}{2} + \frac{3}{2} = 0$

$n^2 - 7n + 6 = 0$

$(n-1)(n-6) = 0$

$(2n-1)(n-3) = 0$

don't forget to ÷2 again!

	n	-1
n	n^2	$-1n$
-6	$-6n$	6

$= -7n$

$2n - 1 = 0$ $\quad n - 3 = 0$

$+1 \quad +1$ $\quad n = 3$

$\frac{2n}{2} = \frac{1}{2}$

$n = \frac{1}{2}$

17) $5p^2 - 2p - 16 = 0$

18) $7m^2 + 36m + 32 = 0$

19) $8k^2 - 59k - 40 = 0$

20) $2m^2 + 19m + 35 = 0$

21) $\frac{3n^2}{3} - \frac{19n}{3} + \frac{20}{3} = 0$

$n^2 - 19n + 60 = 0$

$(n-15)(n-4) = 0$

don't forget to ÷3 again!

$(n-5)(3n-4) = 0$

$n - 5 = 0$ $\quad 3n - 4 = 0$

$+4 \quad +4$

$\frac{3n}{3} = \frac{4}{3}$

$n = 5$ $\quad n = \frac{4}{3}$

	n	-4
n	n^2	$-4n$
-15	$-15n$	60

$= -19n$

22) $\frac{5b^2}{5} + \frac{17b}{5} - \frac{12}{5} = 0$

$b^2 + 17b - 60 = 0$

don't forget! $\frac{(b+20)}{5}\frac{(b-3)}{5} = 0$

$(b+4)(5b-3) = 0$

$b + 4 = 0$ $\quad 5b - 3 = 0$

$b = -4$ $\quad +3 \quad +3$

$\frac{5b}{5} = \frac{3}{5}$

$b = \frac{3}{5}$

	b	-3
b	b^2	$-3b$
20	$20b$	-60

$= 17b$