Morning	Afternoon
Socks On	Laces untied
Shoes on	Shoes off
Laces tied	Socks off

PEMDAS

SADME P

1) $3(x-4)+2=5$

$\quad\quad\quad -2 \quad -2$

$$\frac{\cancel{3}(x-4)}{\cancel{3}}=\frac{3}{3}$$

$$x-4=1$$

$$+4 \quad +4$$

$$x=5$$

2) $3(x-4)^2+2=29$

$\quad\quad\quad -2 \quad -2$

$$\frac{\cancel{3}(x-4)^2}{\cancel{3}}=\frac{27}{3}$$

$$(x-4)^2=9$$

$$x-4=3 \qquad x-4=-3$$

$$+4 \quad +4 \qquad +4 \quad +4$$

$$x=7 \qquad x=1$$

SADMEP

3) $x^2 - 4x + 1 = 2$

	x	-2	
x	x^2	$-2x$	$+1$
-2	$-2x$	4	-4

vertex: $(2, -3)$

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

$+3 \quad +3$

$(x-2)^2 = 5$

$x - 2 = \sqrt{5} \qquad x - 2 = -\sqrt{5}$

$x = \sqrt{5} + 2 \qquad x = -\sqrt{5} + 2$

4) $\dfrac{-4x^2 - 44x = 0}{-4}$

$x^2 + 11x = 0$

	x	$+11$
x	x^2	$11x$
$+0$	0	0

$= 0$

OR

	x	$+5.5$	
x	x^2	$5.5x$	
$+5.5$	$5.5x$	30.25	30.25

$(x+11)(x+0) = 0$

$x = -11, \; x = 0$

$(x+5.5)^2 - 30.25 = 0$

$(x+5.5)^2 = 30.25$

$x + 5.5 = \pm 5.5$

$x = -11, \; x = 0$

5) $\frac{y}{-3} = \frac{-3x^2 + 12x + 15}{-3}$ → y-int (0, 15)

$$\boxed{\frac{y}{-3} = x^2 + -4x - 5}$$

To find x-ints, make y=0

$$0 = x^2 - 4x - 5$$

Factor

	x	-5
x	x^2	-5x
1	1x	-5

$0 = (x-5)(x+1)$

x-ints: (5,0) (-1,0)

CTS

	x	-2	
x	x^2	-2x	-5
-2	-2x	4	-4

$0 = (x-2)^2 - 9$

+9 +9

$9 = (x-2)^2$

$x - 2 = 3$ $\quad$ $x - 2 = -3$

$x = 5$ $\quad$ $x = -1$

$\frac{y}{-3} = (x-2)^2 - 9$

$y = -3(x-2)^2 + 27$

Vertex (2, 27)