Names (group) _____ Date _____

Quadratic Function: Practice and Check

PART 1 Group game: Find the pair

1. Cut out the 24 cards and put them face down.
2. Players take turns to turn over two cards. If a formula and a property belong together, the player keeps the pair and explains it with a sketch.
3. If it is not a pair, the cards go back. The player with the most pairs wins.

$(x-2)^2+1$	zeros -3 and 3	$x^2-4<0$	$\mathbb{R}$
$V(-1, 4)$	x^2+1	$(-\infty, -2] \cup [2, +\infty)$	$(x-1)(x-5)$
zeros 2 and 4	$2x^2-8$	$[0, 2]$	$V(2, 1)$
x^2+4x+4	$(-2, 2)$	x^2-6x+5	$-(x+1)^2+4$
one zero -2	$x^2-4 \geq 0$	x^2-6x+8	no zeros
$-x^2+2x \geq 0$	x^2-9	$V(0, -8)$	$x^2+2x+3>0$

Name _____ Date _____

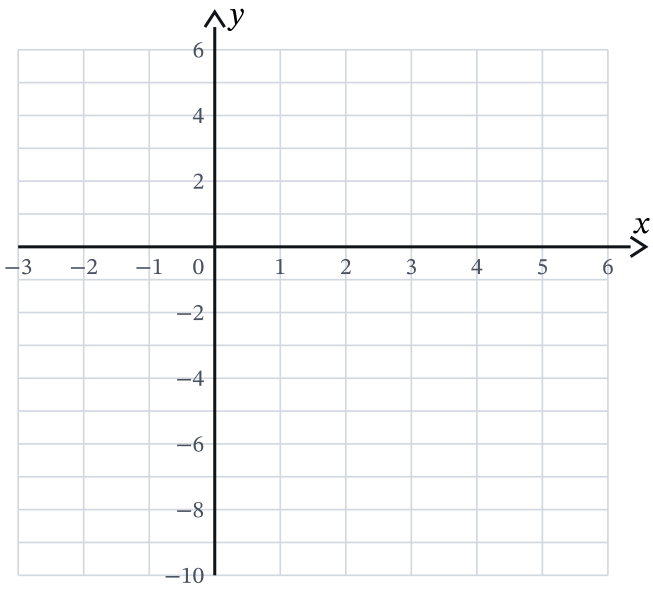
PART 2 Check

1 ON YOUR OWN For $f(x) = x^2 - 4x - 5$:

a) vertex form: $f(x) =$ ☐ $V($☐$,$☐$)$

b) zeros: $x_1 =$ ☐ $x_2 =$ ☐ factored form: ☐

c) a sketch and the solution of $f(x) \leq 0$: $x \in$ ☐



2 ON YOUR OWN How many zeros does $g(x) = 2x^2 - 3x + 4$ have? Explain with the discriminant.

$D =$ ☐ zeros: ☐

3 ON YOUR OWN An arrow is shot upwards: $h(t) = -5t^2 + 30t$. What is its greatest height, and how long is it in the air?

greatest height ☐ m in the air ☐ s

How am I doing?

- ☐ I can draw a parabola, find the vertex and zeros, and solve a quadratic inequality.
- ☐ I can, but sometimes I need a graph or the app.
- ☐ I need more practice.