

QUADRATIC EQUATIONS – 3. INEQUALITIES

Name:

Date:

Please remember to show/communicate all your work. You DO NOT need to answer every question, two correct answers at any level will demonstrate a student's level of attainment.

LEGEND						
✓	M	x	S	N	G	H
correct	mostly correct	incorrect	silly mistake	did not know how to start or skipped	with group	got help

	Mild (🌶️🌶️)		Medium (🌶️🌶️🌶️)		Spicy (🌶️🌶️🌶️🌶️)
Questions	#1	#2	#3	#4	#5
Results					

- Using digits -3 to 3, and without duplicating numbers, create an inequality that has the solution $x > 2$, and sketch the number line. Explain some of the steps you took to solving, your initial thoughts/attempts, and include any rough work to help show your thinking.

$$x + \square > \square$$

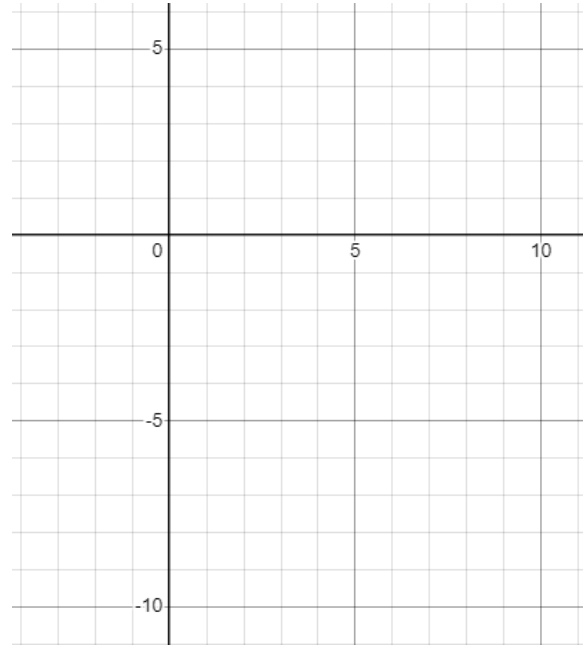
- State the solution of the following inequalities and graph the solution on a number line.

(a) $x - 3 \geq 0$

(b) $2x + 11 < 3$

QUADRATIC EQUATIONS – 3. INEQUALITIES

3. Simplify $\frac{1}{2}(x - 6)^2 \geq 4.5 - y$ and shade in the appropriate area on the graph.



4. State the solution of the following inequalities and graph the solution on a number line.

(a) $x^2 \geq x + 2$

(b) $x + 4 > 3x^2$

QUADRATIC EQUATIONS – 3. INEQUALITIES

5. A diver's height above the water can be measured by the function $h(t) = \frac{-10}{9}(t - 0.5)^2 + 2.5$ where 'h' is the height above the water in meters, and 't' is the time in seconds after leaving the diving board. How long is the diver in the air for and during which period(s) of time is the diver within 2.4m from the surface of the water?