

Teachers: Castello, Pereira, Piuser, Tober

Course: Algebra 1

Periods: all

Assignment: Week 5

Teacher: Castello, Pereira, Piuser, Tober Subject: Algebra 1 Dates: Week 5: 5/15
- 5/23 Welcome to our Distance Learning Classroom!

Student Time Expectation per day: 30 minutes

| Content Area & Materials Algebra 1 | Learning Objectives | Tasks | Check-in Opportunities | Submission of Work for Grades |
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| <p>PAPER PACKET</p> <ul style="list-style-type: none"> Weekly Planner (this sheet) Note page with examples 3 worksheets on graphing equations and inequalities. <p>Digital Option</p> <ul style="list-style-type: none"> Log on to your khan academy account at www.khanacademy.org Complete the khan academy activities assigned by your teacher. | <p>ESSENTIAL QUESTION: How do you graph quadratic equations on the coordinate plane?</p> <p>STUDENTS WILL...</p> <ul style="list-style-type: none"> Be able to use a table to find points on a graph of a quadratic equation Be able to use the points generated by the table to graph a quadratic function. | <p>PAPER PACKET: If you picked up a paper packet you are expected to turn in the 2 completed pages in order to get credit for week 5. (per distance learning calendar, week 5 is optional, but encouraged). You are also welcome to scan or take photos of your work and email them to your teacher.</p> <p>ONLINE WORK: You are to complete the assigned Khan academy activities by May 23; again, as with the paper packet, this is optional but encouraged work.</p> | <p>OFFICE HOURS:</p> <p>Mrs. Castello: Office Hours: Mon – Fri, 9am – 11am Email: ecastello@tusd.net Google #: (209) 597-8667</p> <p>Ms. Pereira: Office Hours: Zoom meeting Mon-Fri, 12pm – 1pm Email: mpereira@tusd.net Google #: (209) 597-8039</p> <p>Mr. Piuser: Office Hours: Mon-Fri, 12pm – 2pm Email: apiuser@tusd.net Google #: (209) 691-3102</p> <p>Mrs. Tober: Office Hours: Mon – Fri, 1pm – 3pm Email: jtober@tusd.net Google #: (209) 597-8704</p> | <p>Method: Scan, photo, email, or deliver</p> <p>Students are expected to complete either the paper packet <u>or</u> the digital option in order to receive full credit. Students <u>must</u> include the work required to arrive at the correct answer.</p> <p>IF SUBMITTING THE PAPER PACKET, LABEL WITH:</p> <ul style="list-style-type: none"> Student Name (First and Last) Teacher Name Algebra 1 Period #: _____ <p>PREFERRED: TO SUBMIT ELECTRONICALLY, simply email your teacher a scan or photos of your completed work.</p> |

Definitions

Quadratic: A non-linear function that results in a parabola for a graph.

Table: A list of values that you plug in for x on one side and the resulting value you get on the other side.

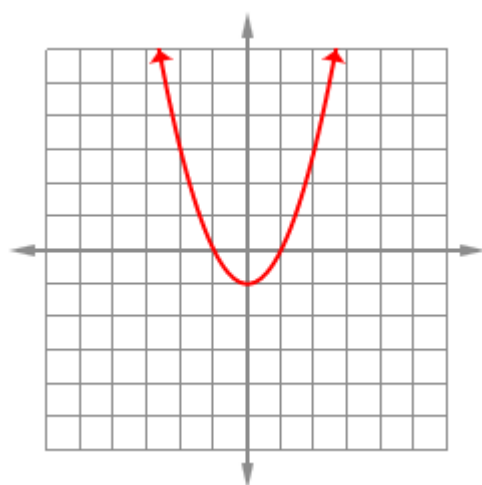
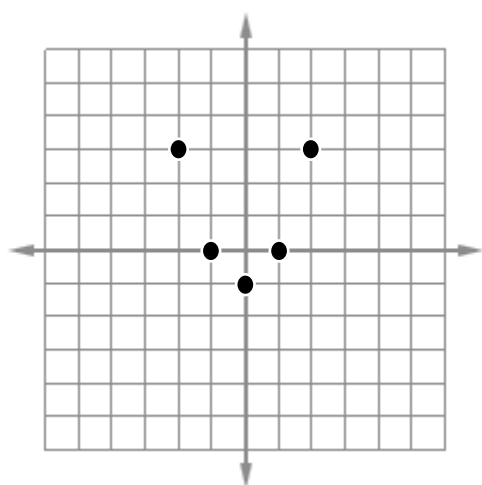
Graphing Quadratic Functions

Ex: $y = x^2 - 1$

Make a table; $-2, -1, 0, 1,$ and 2 usually make good values to plug in.

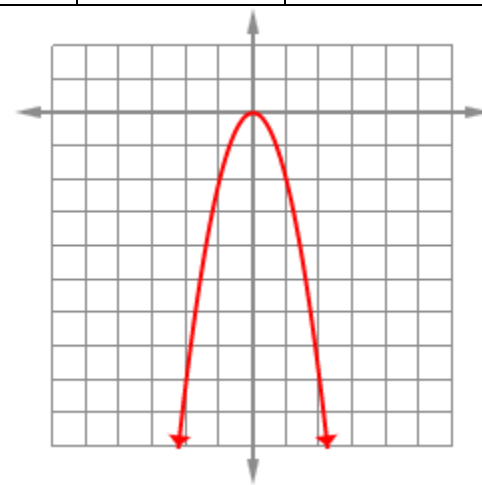
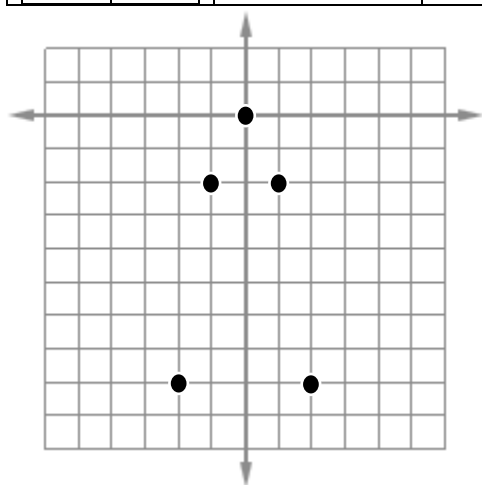
| x | y | $y = (-2)^2 - 1$ $y = 4 - 1$ $y = 3$ | $y = (-1)^2 - 1$ $y = 1 - 1$ $y = 0$ | $y = 0^2 - 1$ $y = 0 - 1$ $y = -1$ | $y = 1^2 - 1$ $y = 1 - 1$ $y = 0$ | $y = 2^2 - 1$ $y = 4 - 1$ $y = 3$ |
|----|----|--------------------------------------------|--------------------------------------------|------------------------------------------|-----------------------------------------|-----------------------------------------|
| -2 | 3 | | | | | |
| -1 | 0 | | | | | |
| 0 | -1 | | | | | |
| 1 | 0 | | | | | |
| 2 | 3 | | | | | |
| | | $(-2, 3)$ | $(-1, 0)$ | $(0, -1)$ | $(1, 0)$ | $(2, 3)$ |

Plot the points, then connect to form a parabola (note the smooth curve between points)



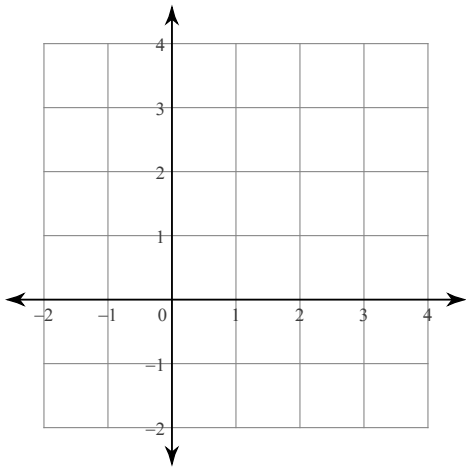
Ex 2: $y = -2x^2$

| x | y | $y = -2(-2)^2$ $y = -2(4)$ $y = -8$ | $y = -2(-1)^2$ $y = -2(1)$ $y = -2$ | $y = -2(0)^2$ $y = -2(0)$ $y = 0$ | $y = -2(1)^2$ $y = -2(1)$ $y = -2$ | $y = -2(2)^2$ $y = -2(4)$ $y = -8$ |
|----|----|-------------------------------------------|-------------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| -2 | -8 | | | | | |
| -1 | -2 | | | | | |
| 0 | 0 | | | | | |
| 1 | -2 | | | | | |
| 2 | -8 | | | | | |
| | | $(-2, -8)$ | $(-1, -2)$ | $(0, 0)$ | $(1, -2)$ | $(2, -8)$ |

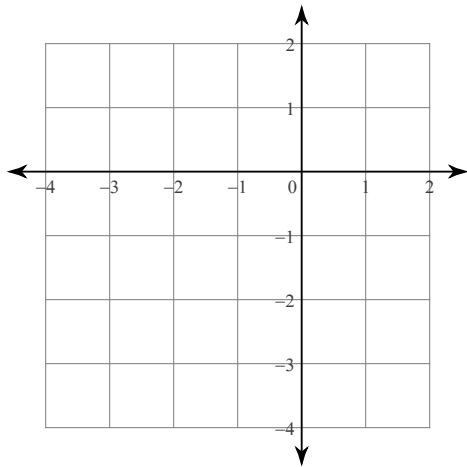


Sketch the graph of each function. Plot at least 5 Points each.

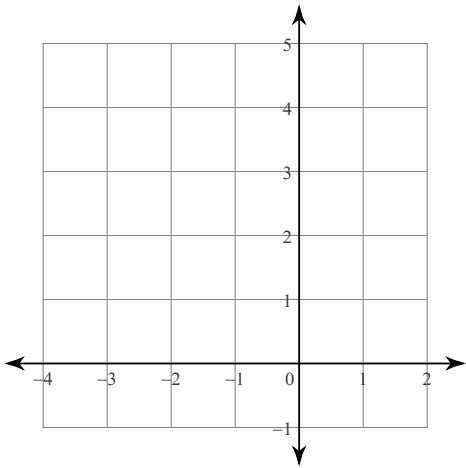
1) $f(x) = x^2 - 2x$



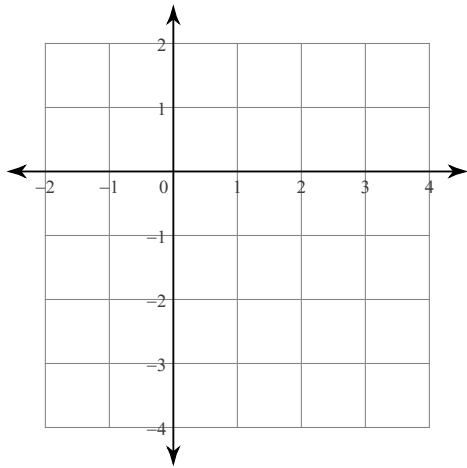
2) $f(x) = x^2 + 2x - 2$



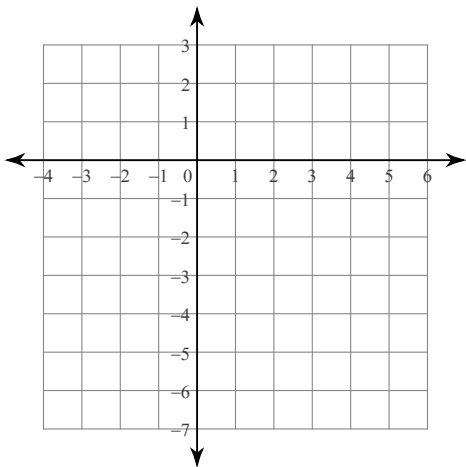
3) $f(x) = -x^2 - 2x + 3$



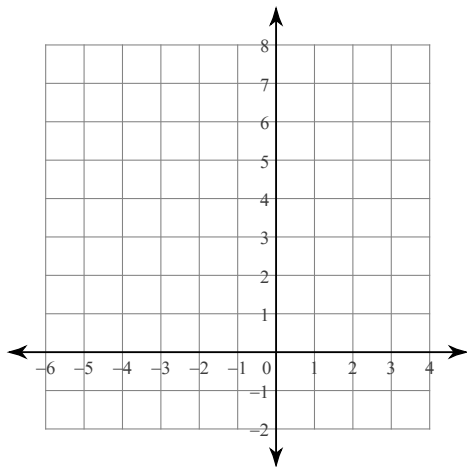
4) $f(x) = -x^2 + 4x - 3$



5) $f(x) = -2x^2 + 4x$

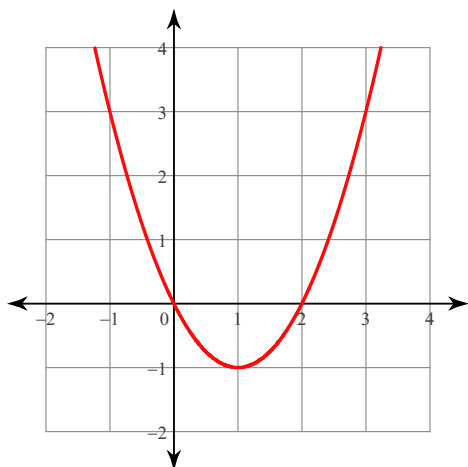


6) $f(x) = 2x^2 + 4x + 1$

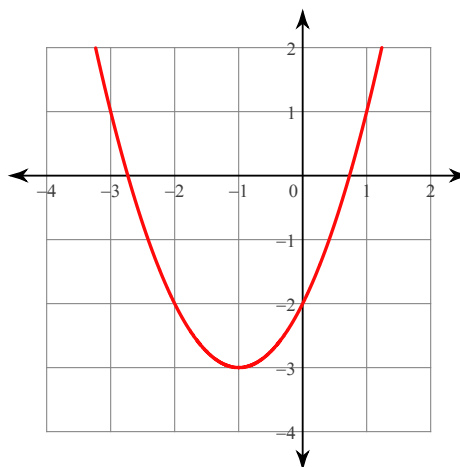


Sketch the graph of each function. Plot at least 5 Points each.

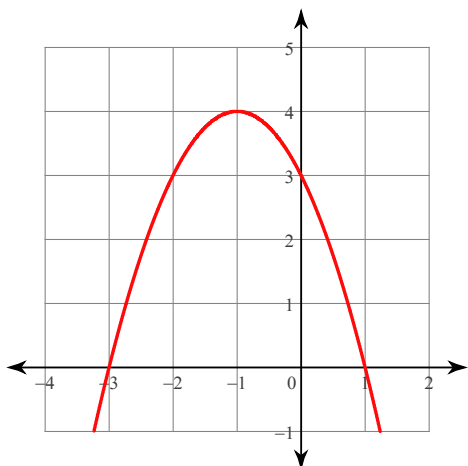
1) $f(x) = x^2 - 2x$



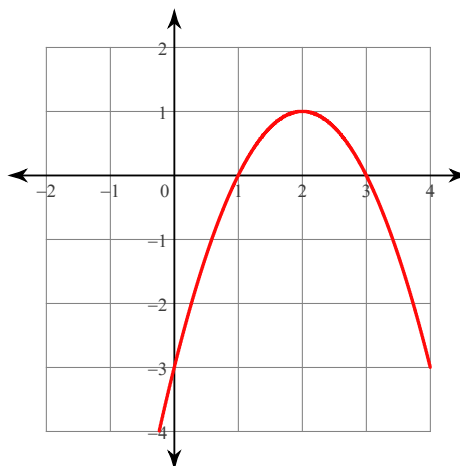
2) $f(x) = x^2 + 2x - 2$



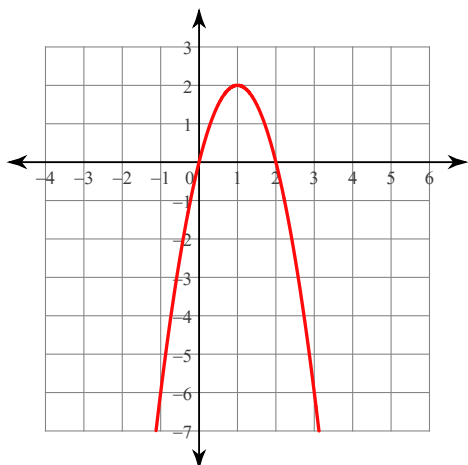
3) $f(x) = -x^2 - 2x + 3$



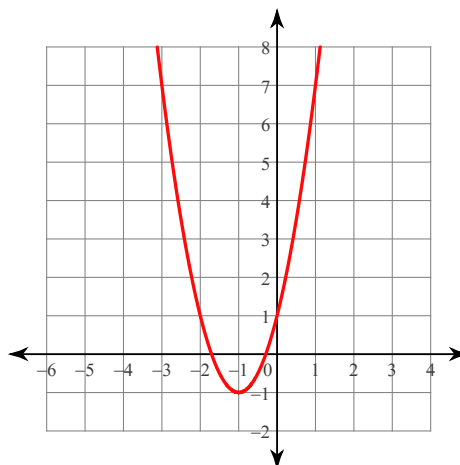
4) $f(x) = -x^2 + 4x - 3$



5) $f(x) = -2x^2 + 4x$



6) $f(x) = 2x^2 + 4x + 1$



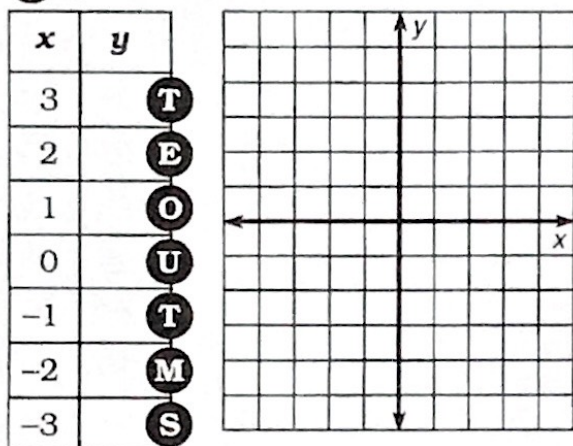
When Silo Gump Graduated from College With a Degree in FLOWER GROWING, He Was Voted . . .



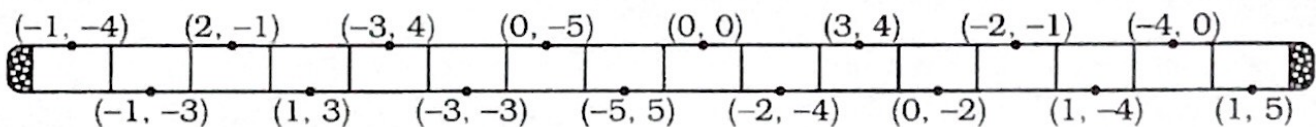
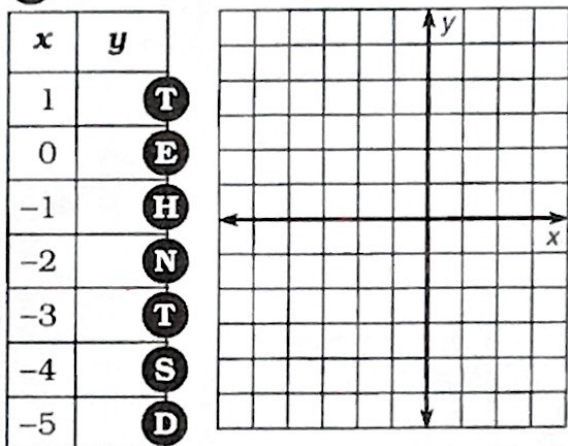
Complete the table of solutions for each equation. Write the letter for each ordered pair in the corresponding box below. Then graph the equation.



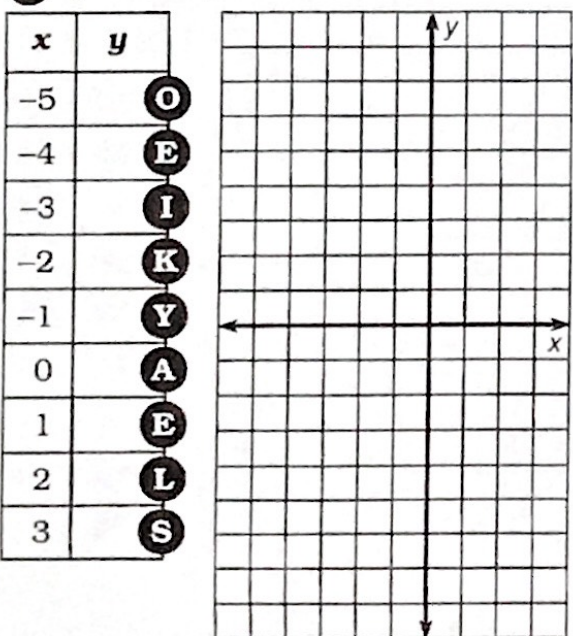
1 $y = x^2 - 5$



2 $y = x^2 + 4x$



3 $y = x^2 + 2x - 7$



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

