Bellwork Alg 2A Tuesday, January 31, 2017 | ANSWERS |

Use the given equation to fill out the table, plot the points using a sheet of graph paper, and connect the points to form a parabola. Then answer the remaining questions about each parabola.

1. $y = x^2 - 4x + 3$

X	Y
−1	8
0	3
1	0
2	−1
3	0
4	3
5	8

SEE NEXT SHEET FOR GRAPHS

a. State the coordinates of the vertex. (2, −1)

b. Draw the Line of Symmetry as a dashed line.

c. Write the equation of the Line of Symmetry. $x = 2$

d. State the x and y intercepts of this parabola. x-int: 1, 3 y-int 3

e. State the Domain and Range of this parabola. Domain: All Real #s Range: $y \geq -1$

2. $-x^2 + 3$

X	Y
−2	−1
−1	2
0	3
1	2
2	−1

a. State the coordinates of the vertex. (0, 3)

b. Draw the Line of Symmetry as a dashed line.

c. Write the equation of the Line of Symmetry. $x = 0$

d. State the x & y intercepts of this parabola. x-int $\approx \pm 1.7$ y-int = 3

e. State the Domain and Range of this parabola. Domain: All Real #s Range: $y \leq 3$

3. $y = 2x^2 + 4x$

X	Y
−4	16
−3	6
−2	0
−1	−2
0	0
1	6
2	16

a. State the coordinates of the vertex. (−1, −2)

b. Draw the Line of Symmetry as a dashed line.

c. Write the equation of the Line of Symmetry $x = -1$

d. State the x & y intercepts of this parabola. x-int: −2, 0 y-int = 0

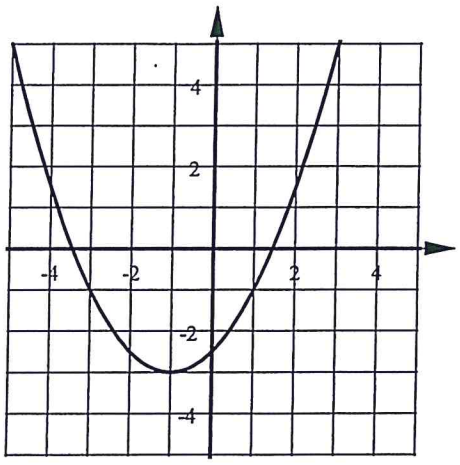
e. State the end behavior of this parabola. as $x \to -\infty$, $y \to \infty$ as $x \to \infty$, $y \to \infty$ or $(\uparrow, \uparrow)$

4. $y = -2x^2 + 12x - 19$

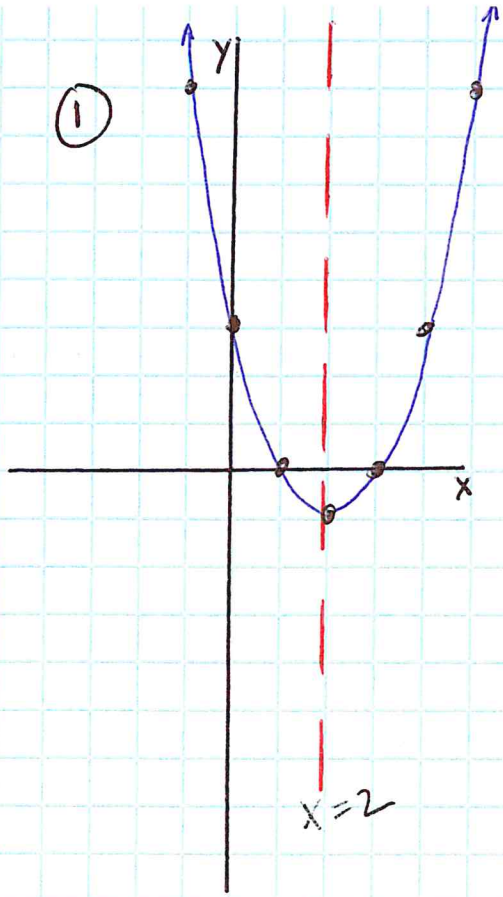
X	Y
1	−9
2	−3
3	−1
4	−3
5	−9

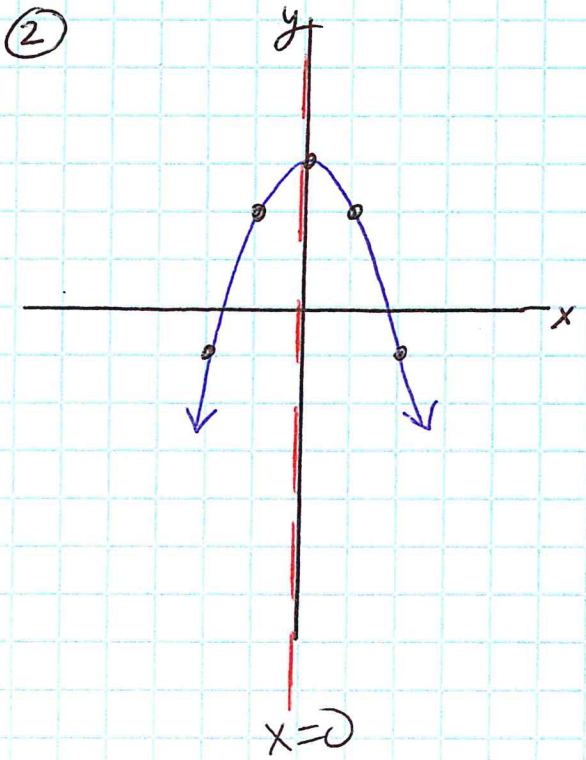
a. State the x and y intercepts of this parabola. No x-int y-int = −19

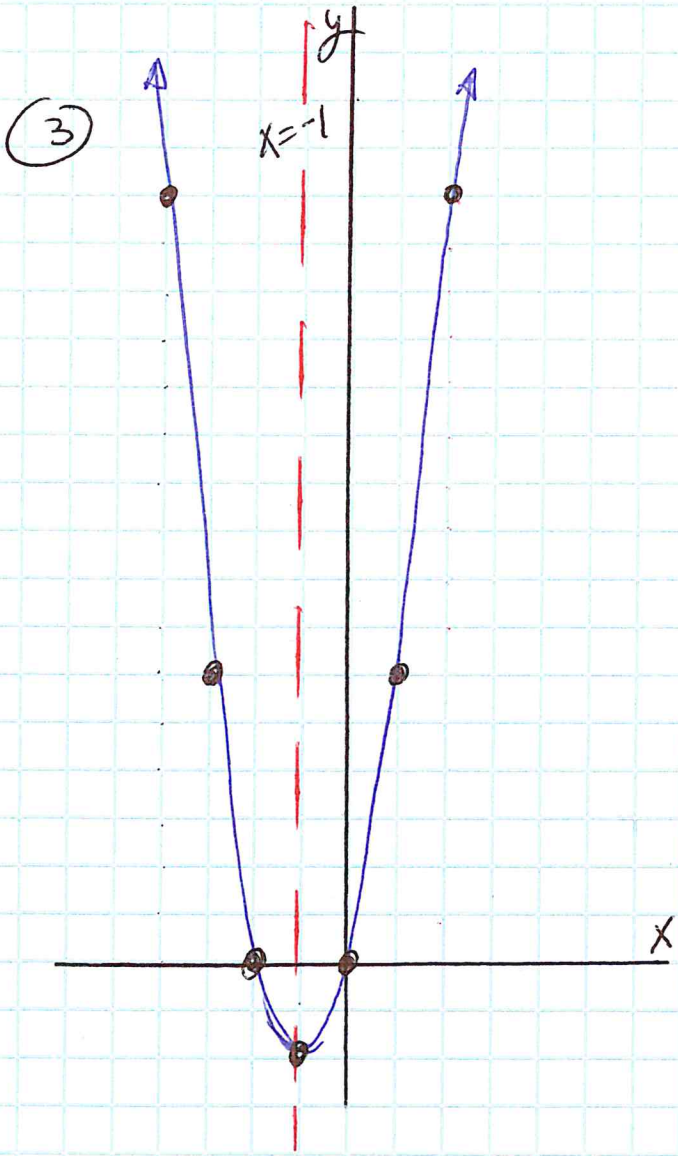
5.



a. State the x and y intercepts of this parabola. x-int $\approx$ −3.5, 1.5 y-int $\approx$ −2.5

① 

② 

③ 

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