

NAME:

Math 010 Fall 22 Test 2

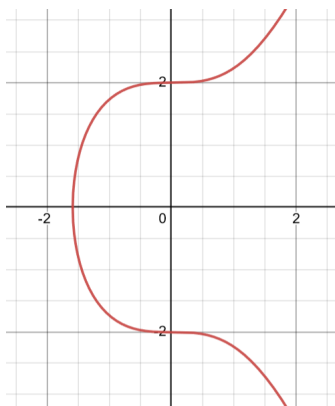
Directions: Do all problems. Partial credit will be awarded. No notes/books/friends allowed. No question requires a calculator but you are welcome to use one. Do not use any decimals in your answers. Graphing calculators above the level of a TI - 84 Plus are not allowed (in particular, calculators with a built in CAS or QWERTY keyboard are not allowed). You have 50 minutes to complete this exam.

REMEMBER TO SHOW ALL WORK

1. (5 points) Compute the mid point and the distance of these two points $(3, 2)$ and $(7, 5)$

2. (10 points) Determine if the relation is a function $(1, 2), (2, 2), (5, 2), (9, 9)$

3. (10 points) Determine if the function in the picture below is a function.



4. (5 points) Graph using a table and describe the shift from the parent function:

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

5. (5 points) Determine the domain and range of this function.

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

6. (10 points) Solve for x: $10 - 2(1 - 4x) = 6(3x - 5) + 8$

7. (5 points) Graph $f(x) = 3x - 2$ using slope and y-intercept.

8. (10 points) Find the slope between $(5, 3)$ and $(7, 7)$.
9. (10 points) Find the equation of a line in slope-intercept form with slope -5 and going through the point $(2, -7)$.
10. (10 points) Find the equation of a line in slope-intercept form with slope $\frac{3}{4}$ and going through the point $(2, 2)$.
11. (10 points) Find the equation of the line parallel to $-6x + 2y = 4$ and containing the point $(0, -1)$.
12. (10 points) Find the equation of the line perpendicular to $y = \frac{1}{3}x + 9$ and containing the point $(0, 4)$.