

You hav 50 min. Answer each non-graph question neatly on the line provided.

Name: _____

1. (5 points) Find all real solutions z of $z(z - 3) = 5$.

1. _____

2. (5 points) Find an equation of the line with x-intercept 1 and y-intercept -3 .

2. _____

3. (5 points) Find all real solutions to $x^2 - 4x + 21$.

3. _____

4. (5 points) Solve the inequality $x^2 + 2x > 3$. Express your solution in interval notation.

5. (5 points) Find all real solutions x of $\sqrt{8x-1} = 3$.

5. _____

6. (5 points) Find all real solutions w of $w - \frac{3}{2} > \frac{1}{2}w$. Express your solution using interval notation.

6. _____

7. (5 points) Find the center and radius of the circle given by the equation $x^2 + y^2 - \frac{1}{2}x + \frac{1}{2}y = \frac{1}{8}$.

7. _____

8. (5 points) Make a table of values and sketch the graph of $y = |x - 3|$.

9. (5 points) Solve $F = G\frac{mM}{r^2}$ for m .

9. _____

10. (5 points) Find the x - and y - intercepts of the graph of $2x - 4y = 18$.

10. _____

11. (5 points) Solve $\frac{6}{x-3} = \frac{5}{x+4}$ for x .

11. _____

12. (5 points) Find an equation of the line passing through $(-1, 2)$ and parallel to the line $x = 5$.

12. _____