

Name _____

Each problem is worth 5 point: 3-points for Work/Explanation and 2 points for the correct answer. Use another piece of paper to complete your work. Number the problems and box your answers. Partial credit will be awarded. Neatness counts. Single cross outs are ok.

Write and sign the Academic Honesty Statement below.

Factor the polynomial completely.

1) $8x^3 - 27$

Simplify.

2) $6 + \frac{1}{3}$
 $3 - \frac{2}{9}$

Find the average rate of change of the function over the given interval.

3) $y = \frac{3}{x-5}, [0, 4]$

Solve the equation.

4) $6[-6x - 2 + 2(x + 1)] = 3x - 2$

Solve using the substitution method.

5) $y = 3x - 3$
 $2x + y = 7$

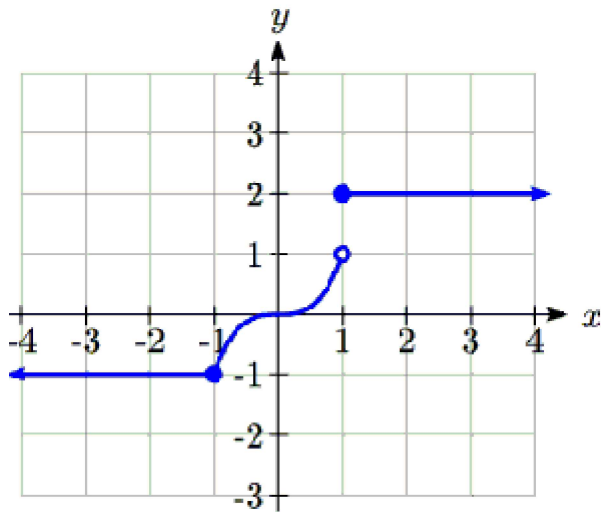
Find an equation of the line in point - slope form that passes through these points.

6) Passing through (8, -9) and (0, -4)

Find the requested value.

7) Find $f(0)$ and $f(10)$ for
 $f(x) = \begin{cases} x - 4, & \text{if } x < 7 \\ 7 - x, & \text{if } x \geq 7 \end{cases}$

Write a piece-wise defined function to represent the graph below. Make sure to include the domain limitations..



8)

Solve.

9) Sales of frozen pizza for a club fund-raiser decreased from 850 one year to 635 the next year. What was the percent of change?

10) $\frac{3}{x} + \frac{3}{4} = 1$