Assignment: G1 – 3 points
First point in class Tue, Jan 8
Second point in class Thur, Jan 10
Third (individual) point Tue, Jan 14

Names: ____________________
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Submit a group copy at the end of each class.

NO PHONES, NO CALCULATORS

1. $x - 3(6 + x) = 1 - (x + 2)$; $x =$ ____________

2. $5x(x + 3) = x + 3$; $x =$ __________

3. $\frac{x^2-20}{x^2-7x+12} = \frac{3}{x-3} + \frac{5}{x-4}$; x = __________

4. $(5\sqrt{3} + 1)(3\sqrt{3} - 1) =$ ____________

5. The equation of the line through the points (0, -2) and (3, 1) is ______________________

6. The equation of the line through the point (4, -2) and that is parallel to $y = -3x + 3$ is_____________

7. The equation of the line perpendicular to $3x + 2y = 9$ and that crosses the graph of $f(x) = 3x^2 - 1$ at its vertex is ______________.

8. The area of the region bounded by the x-axis, the y-axis, the graph of the function $y = -3x + 12$, and the line $x = 2$ is ______ square units.

9. The area of the region bounded by $y = 4$ and $y = 2 + |x|$ is ____ square units.

10. The area of the region within the graph of the equation $(x - 2)^2 + y^2 = 4$ on the interval [2,4] is ____ square units.

11. Let M be the slope between (1, 1) and the point (a, a^2) on the graph of $y = x^2$.

    a. $\lim_{a \to 2} M =$

    b. $\lim_{a \to 1} M =$

12. Let A be the area between the graph of $f(x) = x + 2$ and the x-axis from $x = 2$ to $x = r$.

    a. $\lim_{r \to 6} A =$ ____

    c. $\lim_{r \to 2^+} A =$ ____

    b. $\lim_{r \to 4} 2A =$ ____

    d. $\lim_{r \to 0} A =$ ____

13. $\lim_{x \to 4} 3x + 5 =$__________

14. $\lim_{x \to 1} |1 - x| =$__________

15. $\lim_{x \to 1} x + |1 - x| =$__________

16. $\lim_{x \to 0^+} \frac{\sqrt{x}}{x} =$__________

17. $\lim_{x \to 0^-} \frac{\sqrt{x}}{x} =$__________

18. $\lim_{x \to 1} x^n =$ ________