

Name: _____ Due Date: September 9th 2016

Pre-Calculus Summer Packet

Attached is your summer packet for the Pre-Calculus course. **This is worth a graded homework assignment.**

You **MUST SHOW WORK** in order to receive credit. This means if you typed something into a calculator in order to solve it, you must write what you typed so I know how you found the answers.

NO WORK = NO CREDIT (Graded for correctness)

The problems are on the work you've covered this year in Algebra II. Use old notes to help you, and if possible use the internet.

"I didn't know how to do that one" will not get you credit. Try something, even if it's wrong.

NOT HAVING A CALCULATOR IS NO EXCUSE FOR NOT COMPLETING A PROBLEM. FIND A WAY.

If you do not in hand this packet in on September 9th, OR if there is no work with your answers then you will receive a 0.

If you need more room just attach any papers with work on them. Any work attached **MUST BE IN ORDER.**

Good luck and have a great summer!

Ms. Torrance

1. Evaluate $4x - 6y$ when $x = 5$ & $y = -3$
2. Simplify: $11 + q - 3q^2 + 18q^2 - 2 + q$
3. Simplify: $5(x - 3y) + 2(4y - x)$
4. Solve: $5n + 11 = -9$
5. Solve: $-t - 2 = 9(t - 8)$
6. Solve for y : $15y + 2x = -30$ Then find y when $x = 15$
7. Solve: $-5x - 6 < 19$
8. Solve: $5 < 2x + 3 \leq 11$

9. Solve: $|x + 3| = 4$

10. To set up a wireless network for Internet access at home, you buy a network router for \$75. The fee for DSL service is \$18/month. Write an expression for the amount of money you spend in n months. How much money do you spend in 12 months?

11. Evaluate: $f(x) = 3x^2 - 2x + 11$ when $x = -6$

12. Find the slope of the line passing through: $(6, -7)$ $(13, -7)$ Then tell whether the line rises, falls, is horizontal, or vertical.

13. Find the slope of the line passing through: $(-4, 9)$ $(-4, 8)$ Then tell whether the line rises, falls, is horizontal, or vertical.

14. Graph: $y = (3/2)x + 3$ (Must clearly label graph, need a table of points)

15. Find the equation of the line that passes through $(10, 2)$ & is perpendicular to $y = -5x + 7$

16. Draw a scatterplot, draw a best-fit line, estimate y when x = 10:

X	1	2	3	4	5
y	97	91	87	81	75

17. Solve the system algebraically: $3x + y = -9$

$$x - 2y = -10$$

18. Factor: $x^2 - 64$

19. Factor & solve: $x^2 - 13x + 42 = 0$

20. Factor & solve: $10x^2 + 11x - 6 = 0$

21. Solve by completing the square: $x^2 + 4x - 14 = 0$

22. Solve using quadratic formula: $2x^2 - x + 6$

23. Simplify: $x^3(x^2)x^{-4}$

24. Simplify: $\left(\frac{x^{-4}}{y^2}\right)$

25. $(3x - 5)^3$

26. $(3x^3 - 14x^2 + 16x - 22)/(x - 4)$ Hint: Long division or synthetic

27. Simplify: $\sqrt{72x^3}$

28. $\frac{(x-3)(x+1)}{x} * \frac{x}{x^2-9}$