Name:_____ Mr. Ayer H Precalculus Summer Assignment

_____/60 (2 Points Each) **NO CALCULATORS**

Please complete the attached packet without the use of outside aids. Calculators are not permitted. These should be prepared for the first day of class. Students who do not complete the summer assignment for the first day of class may receive points off. Additionally, those who do not turn in their assignment may be moved to a lower course. By signing below, you are certifying that the work contained herein is your own and that you have not used restricted resources. You are also agreeing with the above statements. Email ayerr@slshs.org with questions!

Sign:_____ Date:_____

Multiply the Following:

1. $(2x-4)(6x+2)$

2. $(3x-2)(2x+2)(5x-4)(x+3)$

3. $4(2x-3)(x^2-x+1)$

Solve Each (if not factorable, use quadratic formula $\left(x = \frac{-b \pm \sqrt{b^2-4ac}}{2a} \right)$ and solve; may have imaginary solutions):

4. $0 = 2x^2 + 5x - 3$

5. $x^2 = -16$

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6. $|x-3|=8$

7. $0=6x^2-17x+12$

8. $(x-2)(x+3)(2x-1)(4x+12)=0$

9. $4x^2+6x-19=0$

10. $\frac{x^2-2x+1}{x-1}=0$

11. $x^2+x-6=0$

12. $x^4-1=0$

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Simplify the Following:

13. $\frac{x^3y^2z^5}{2x^2y^{-1}z}$

14. $\frac{x^{-\frac{1}{2}}y^{-3}z^{\frac{1}{3}}}{x^{\frac{1}{2}}y^4z^{-\frac{5}{3}}}$

15. $4\frac{x^2y^{-3}}{2x^2y^{-1}}$

Divide the Following by Long Division or Synthetic Division

16. $\frac{x^3-x^2-9x+9}{x-3}$

17. $\frac{10x^4-9x^3-33x^2+44x-12}{x+2}$

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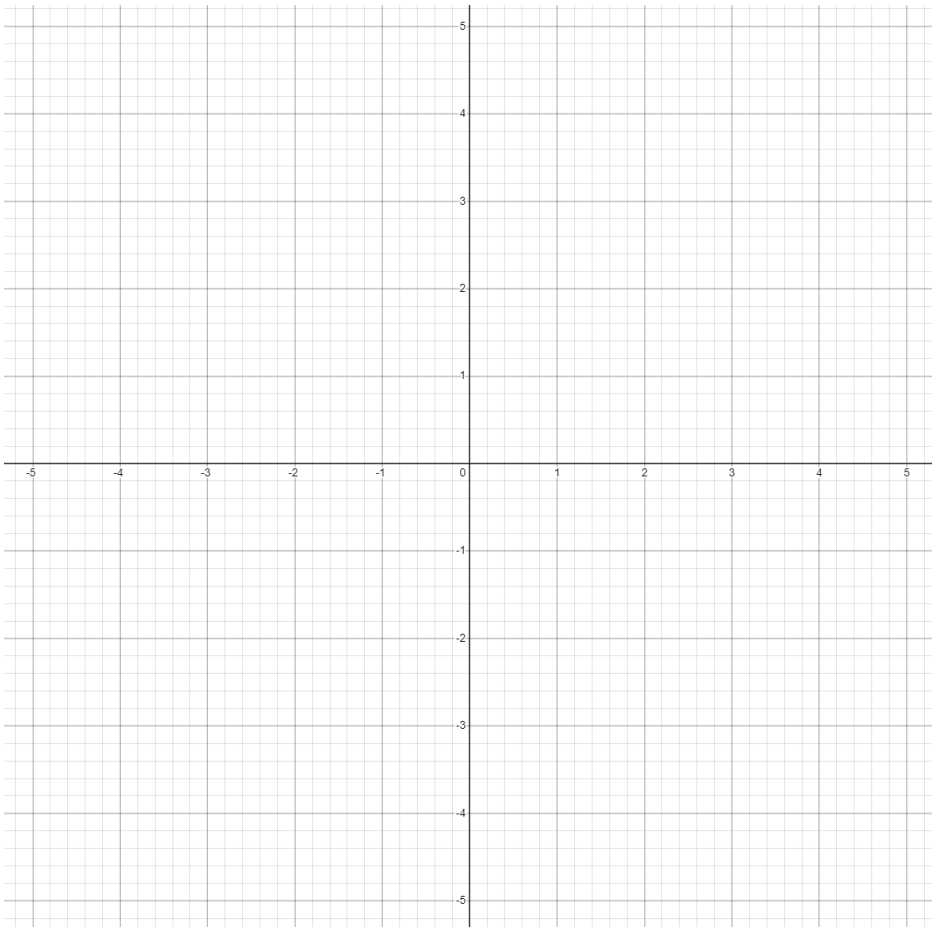
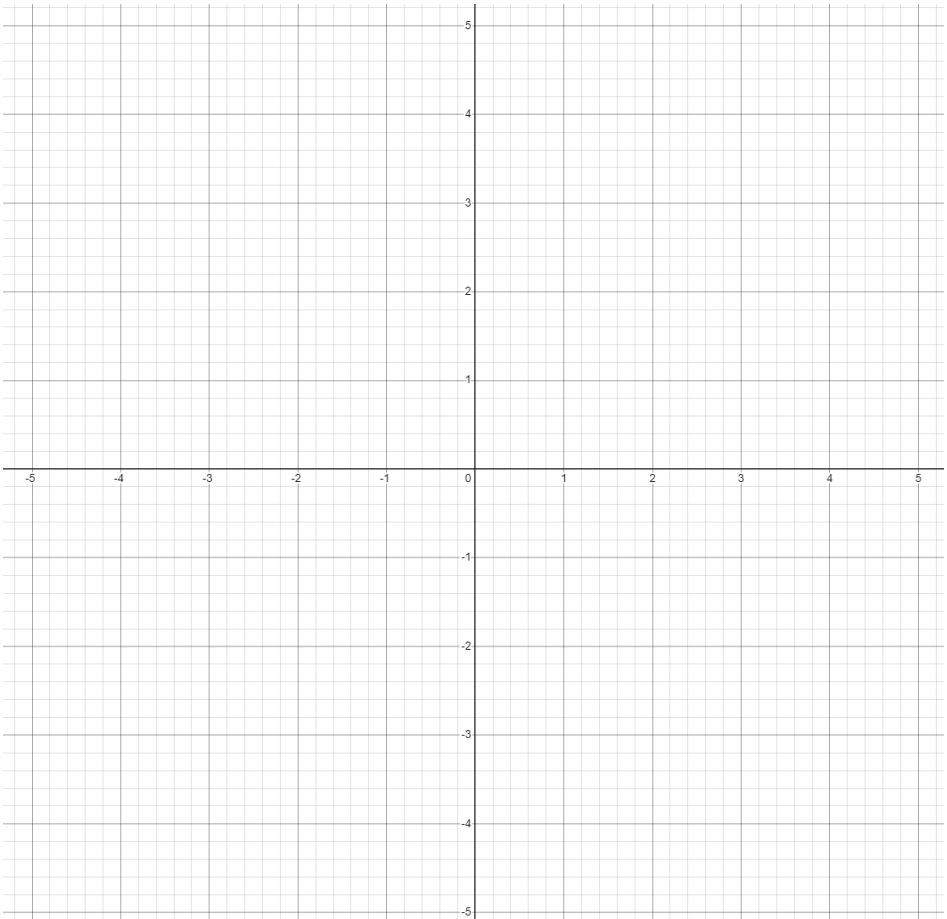
Graph the Following:

18. $y = \frac{1}{2}x + 1$



19. $y = 2x^2 - 3$



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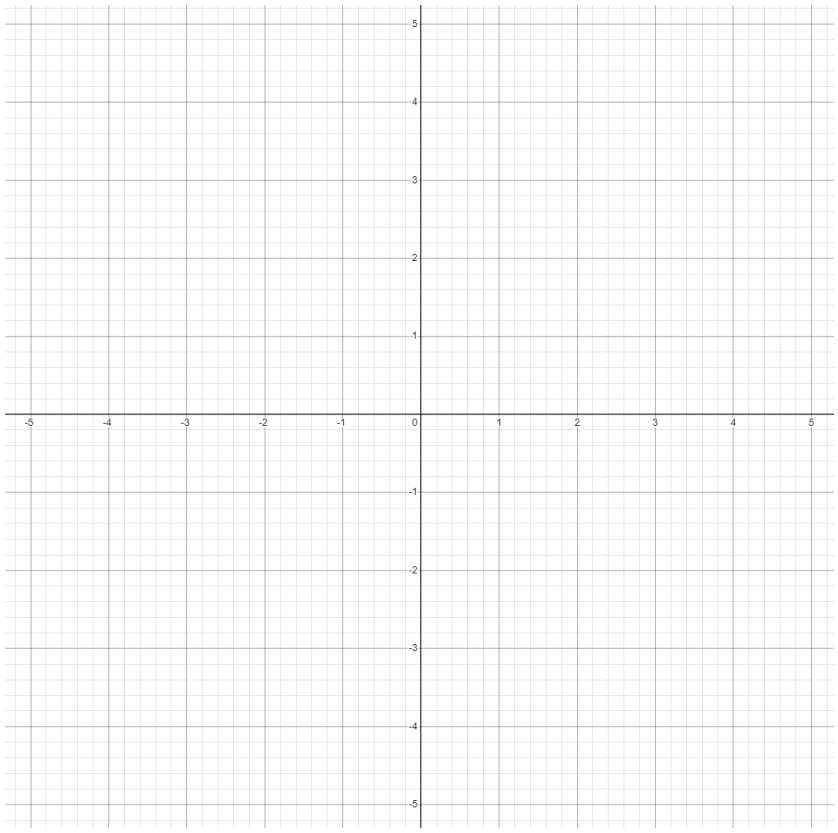
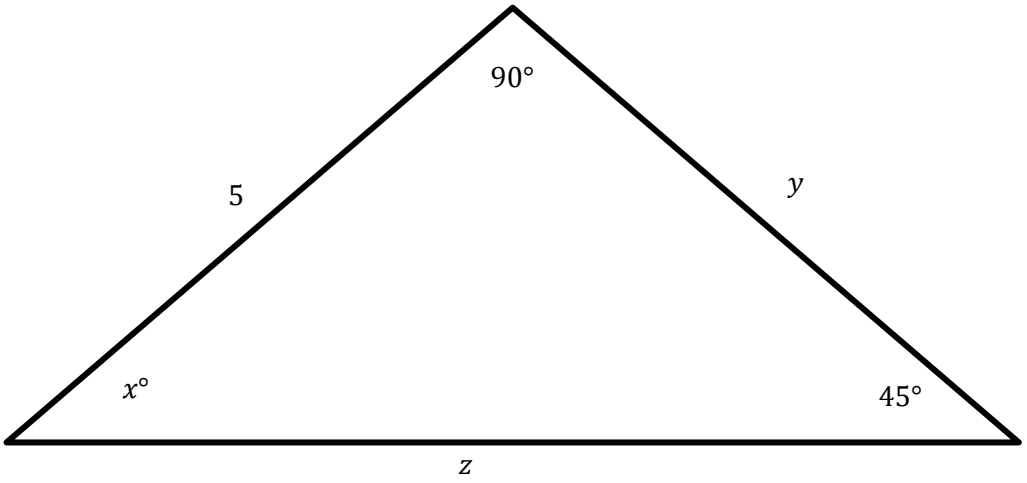
20. $y = \frac{x^2-3x+2}{x^2+x-2}$

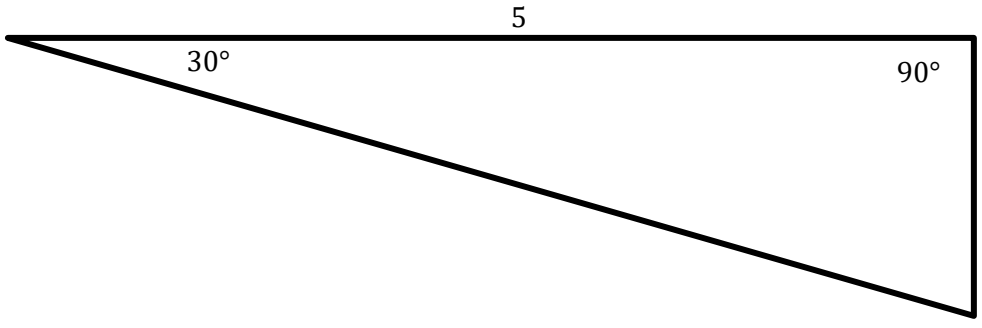


Find Each Variable in the Following using Trig, Inverse Trig, Pythagorean Thrm or Special Right Triangles

21.



22.



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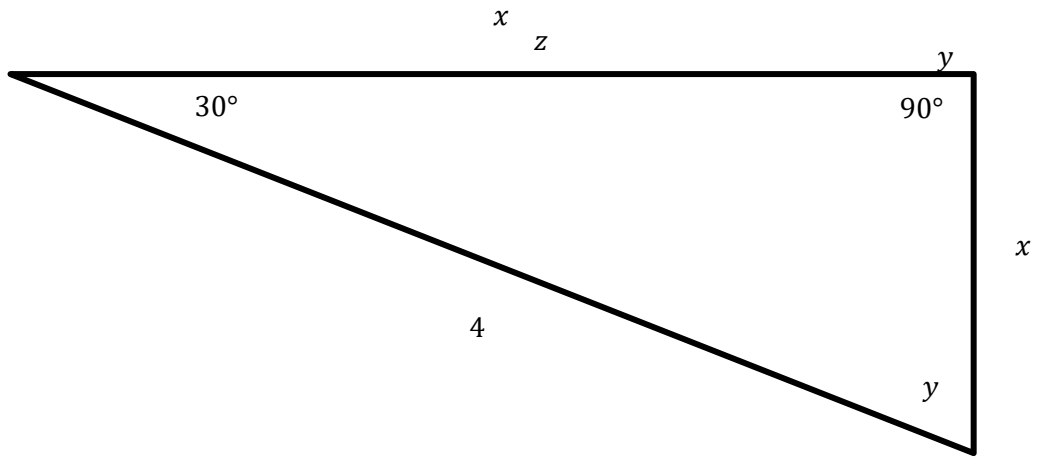
23.



Solve for x (leave in terms of logarithms unless you can simplify)

24. $e^{2x} = 3$

25. $2^{x+4} = 128$

Simplify

26. $log_5(125)$

27. $\ln(e^{100})$

28. $\log_3 243$

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29. $10^{\log(23x)}$

30. $\frac{(m^2a^6(m^{-1})t^7h^{12})}{a^5\left(\frac{1}{t^{-6}}\right)h^{11}}$